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ORIGINAL COMMUNICATIONS.

AN OPHTHALMOSCOPIC STUDY OF A CASE OF HEMORRHAGIC NEURO-RETINITIS.[1]

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THE accompanying phototypes represent the ophthalmoscopic appearances of an extremely interesting case that the writer has had the privilege to study during his terms of service in the ophthalmic wards of the Philadelphia Hospital.

On the 2d of April, 1895, M. McF., a sixty-year-old man, formerly employed as a dyer, gave the following brief history of his ocular condition: Three years previously, Dr. George M. Gould, the writer's immediate predecessor as one of the ophthalmologists to the hospital, removed the right eye for gumma of the ciliary body.

Some four years previous to this, as also shown by the hospital records, the case was under the care of my colleague, Dr. George E. de Schweinitz, who treated him for a double iritis, which rapidly became gummous in type, in the right eye. At that time, the left eye showed a diffused retinitis, and had a visual power of but $\frac{15}{100}$.

When the patient was first seen by the writer, he stated that the vision of the left eye had been steadily failing for three months' time, objects appearing as if they were seen through a mist, or as if they were placed in a cloud.

Direct vision for form was reduced to an uncorrectable $\frac{1}{50}$. The visual

[1] Sketches of case exhibited before the January, 1896, meeting of the Section on Ophthalmology of the College of Physicians of Philadelphia.

fields for white and red, which were carefully taken by Dr. Wm. T. Shoemaker, one of the writer's friends and assistants, showed a decided excentric contraction, the greatest diminutions being in the upper and the lower nasal quadrants.

The pupil was ovoid, with its long diameter of two and one-half millimetres, situated at seventy-five degrees. The iris responded fairly well to light-stimulus and to efforts for accommodation. The anterior scleral veins were full and intra-ocular tension was normal. Extra-ocular muscle movement appeared good in all directions. Oblique examination made plainly evident the marks of an old iritis upon the anterior capsule of the lens.

With the ophthalmoscope, a most interesting and typical picture of hemorrhagic neuro-retinitis, with a just commencing glaucomatic cup, could be seen through the clear media. The details of fundus are so fairly shown in the first of the accompanying phototypes, which have been reproduced from two most excellently and faithfully painted water-color sketches, made by Margaretta Washington, of this city, that an extended verbal description is rendered unnecessary.

Here the irregular and unequal recession of the swollen tissues on and around the optic nerve-head; the just beginning pathological sinking of the outer half of the disk-substance, allowing the lamina cribrosa to be seen through the superjacent translucent structures; the immense fresh hemorrhage, about the size of the disk, with its upper edges and central portion showing the first effects of rapid absorption; the irregular line of degeneration and atrophy extending up and out from the large blood extravasation into a second much fainter hemorrhagic area; the clump-like blood-massings in the macular and supramacular regions; the flame-shaped extravasations into the fibre layer of the retina immediately above the disk edge; and the slightly œdematous condition of the peripapillary area, can all be fairly recognized in the details of the first of the two plates.

On the 17th of September, 1895, the patient was again seen by the writer. At this time, the ophthalmoscopic picture was so different that a new water-color drawing was made by Miss Washington.

As the additional data found in the notings taken at this time by the writer will serve to give a better idea of the conditions seen than the monotint can alone, they are here given directly as written in the writer's case-book.

The nerve-head preserves the same red-gray tint, especially to the outer side, as at the previous examination. The retina appears much more degenerate, this being markedly seen in the temporal region and in and around those portions that have been previously occupied by the deeper-seated hemorrhages. The smaller retinal twigs appear more disturbed in their lateral curvings, this probably being caused by irregular retinal shrinkage and cicatrization. The lumen of the retinal vessels and the relative tints of their contained currents, do not seem to be altered in any way. The ectasia left by the large hemorrhagic mass extends in places directly through to the

sclera, and is bordered by irregular aggregations of pigment which are more dense to its outer edges, though more extensive to its nasal portion. The whitish band, extending over to the second and more peripheral area of degeneration, is more plainly evident, and the faintest superficial haze and somewhat irregular linings remain as the only vestiges of the large peripheral mass with which the great hemorrhage was connected. The excentric cupping of the nerve-head, though somewhat deeper than before, does not appear to be any more extensive than when previously studied.[1]

At this time vision was reduced to the ability to see to count fingers in a small central field at one metre's distance.

The case is here presented from an ophthalmoscopic stand-point only, as offering an interesting example of the peculiarities of retinal, choroidal, and optic nerve-changes, that are produced from low-grade, inflammatory, and degenerative action, and that can be seen only by repeated and careful study of existent objective conditions.

THE PATHOLOGY OF CYSTIC TUMORS OF THE UTERINE ADNEXA.

BY WM. H. WATHEN, A.M., M.D.,
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Cysts in the uterine adnexa arise in the ovary, the hilum of the ovary, and in the parovarium, and are designated oöphoritic, paroöphoritic, and parovarian cysts.

Oöphoritic cysts arise from the follicles in the egg-bearing segment of the ovary; paroöphoritic cysts arise from the remnants of the Wolffian body in the hilum of the ovary, and parovarian cysts from the tubules in the parovarium, the remnants of tubules of the Wolffian duct.

It will thus be seen that, with the exception of oöphoritic cysts, all cysts of the uterine adnexa arise in fœtal remnants that serve no useful purpose to the woman.

Until recently the etiology of all these cysts was supposed to be identical; hence the difficulty in appreciating the correct operative procedures necessary in their removal. Oöphoritic cysts are nearly always multilocular, generally have intracystic glandular growths, and I concur in the opinion of J. Bland

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[1] At the meeting in which these drawings were exhibited, Dr. de Schweinitz showed a third sketch of the ophthalmoscopic appearance made for him by Miss Washington. In this drawing, made but one month later, the retina in the region of the second large and more peripheral hemorrhage had become finely granular, and was flecked with minute whitish points; a remarkable change for so short a period of time.

Sutton and others, that they arise in Graafian follicles, undergoing retrograde processes of development. In large cysts the wall is entirely fibrous, but in the smaller cysts the tumor is lined with stratified epithelium, and, when very small, by the membrana granulosa.

While in unilocular cysts the disappearance of the epithelium may be universal, in multilocular cysts of long standing abundant epithelium may be found lining some of the loculi.

Oöphoritic cysts may be unilocular, but I am impressed with the belief that they are primarily or at some stage of their existence multilocular, the partitions or walls of small cysts having been destroyed. Many of the so-called ovarian unilocular cysts are parovarian cysts. Some of the loculi in multilocular oöphoritic cysts may be small, while others are as large as a melon. They are filled with viscid fluid identical in physical character with mucus.

Unilocular and multilocular dermoid cysts also arise in the ovary and may contain one or all of the following characteristics,—namely, bone, teeth, hair, sweat-glands, sebaceous glands, horn, mammæ, unstriped muscle, and tissue histologically identical with brain matter, hair, teeth, and bone, however, being most frequent and most abundant. The teeth are usually found embedded in loose bone, resembling alveolus, and are developed on the same plan as teeth in the normal situation; they may be few or many.

The bones found in the dermoid tumors and in extra-uterine pregnancy should not be confounded, if we remember that no well-defined bone of any part of the human body is developed in a dermoid growth.

Oöphoritic cysts are nearly always pedunculated, dermoid cysts less frequently so, and they are sometimes found deeply embedded or adherent in the pelvic structures.

These tumors, in timely operations, can usually be removed without difficulty, but the dangers multiply by delay, which causes complications that render the operation difficult, and often fatal,—namely, adhesions to the omentum, the pelvic structures, the abdominal walls, the intestines, the mesentery, the liver, the spleen, and, by pressure, disease of the kidneys; they may suppurate or cause pyosalpinx or pelvic abscesses.

As parovarian cysts arise in the cæcal tubes of the parovarium, which lie in the folds of the broad ligament, these tumors are necessarily in their early stages intraligamentous, and while they usually ascend above the pelvis and form a pedicle, this is not universal, and in some instances well developed parovarian cysts may be apparently as completely intraligamentous as are cysts of the hilum of the ovary. The union of the cyst wall to the investing capsule, however, is not firm, and the tumor may be easily enucleated without injuring any viscus, and without extensive hemorrhage.

These tumors are generally unilocular, of slow growth, do not form adhesions rapidly, and may continue for many years without serious inconvenience to the patient. They are more easily removed, and the mortality is lower than in the removal of any other tumors of the uterine adnexa.

The reverse is true of tumors that arise in the hilum of the ovary, for these cysts unfold the layers of the broad ligament, burrow deep into the pelvic and peritoneal connective tissue, and may become so intimately blended with the adjacent structures as to be almost a continuity of structure,—the uterus, ureters, bladder, deep pelvic vessels, and intestines.

It is sometimes impossible to enucleate these cysts from the investing capsule without injury to ureter, bladder, blood-vessels, or intestines. The ureter has been found lying in front of the tumor, between the wall and the capsule, and has, upon more than one occasion, been divided in making the incision through the capsule.

The cyst may separate the peritoneum anteriorly from the abdominal wall, or separate it posteriorly, opening the mesorectum, the mesocolon, the mesentery of the small intestine, or pass under the cæcum and ascending colon.

We sometimes find a net-work of vessels the size of goose-quills coursing over the capsule of a large embedded cyst of the hilum. This condition is especially well marked where the tumor has unfolded the mesentery so that the bowel lies directly in contact with the cyst wall.

These tumors never have a pedicle and cannot be removed except by enucleation of the cyst wall from its attachment to the capsule and other structures, always being careful to avoid wounding the ureter, the bladder, deep-seated vessels, or intestines. The operation may be as difficult as any in surgery, and should not be undertaken by any one except an experienced abdominal surgeon; otherwise the patient may die on the operating-table or from accident because of ignorance of the correct technique.

As I do not wish to consume the valuable time of the reader, I will conclude with the report of one case, selected from many, to illustrate the dangers of delay in operating for tumors of the uterine adnexa; the necessity for timely operations applies with equal force to other pelvic and abdominal diseases.

While there is too much laparotomy done and too many men are doing this kind of surgery without proper training, there are, nevertheless, many excellent physicians who advise patients not to be operated upon until conditions or complications have arisen that add greatly to the dangers of the operation, and may cause the death of the patient.

I operated on Mrs. N., Salem, Indiana, ten days ago, with the following history: Thirty-nine years old, married, the mother of six children, the last ten weeks old. Two years ago she noticed a tumor in the right inguinal region, which slowly but continuously increased in size until she came to the Kentucky School of Medicine Hospital for operation. Since the birth of her last child the tumor has enlarged more rapidly, and when I first saw the patient the abdomen was as large as in pregnancy at seven months. For six weeks she had but little desire for food, and her digestion and assimilation were bad; her weight, deducting the weight of the tumor, did not exceed eighty pounds. She suffered severe pain in the ab-

domen; her temperature varied from 100° to 103° F., and her pulse from 110 to 125. When the abdomen was opened the omentum, immediately under the incision, was found firmly and broadly adherent to the abdominal and the anterior surface of the tumor. Upon separating the adhesions from the wall an opening was found in the cyst from which was discharged nearly two gallons of pus containing a bunch of hair as large as the fist, thus showing the cyst to be a suppurating dermoid. The omentum was so extensively and firmly adherent to the cyst wall that it was necessary to ligate it in sections and remove it near the bowel. The cyst was then found to be adherent to the ileum, the sigmoid flexure of the colon, and to several parts of the mesentery, necessitating prolonged and careful dissection to remove it and prevent fatal injury to these vital structures. After thorough irrigation with hot sterilized water the incision was closed, and she was removed from the operating-table with a pulse of 140, but suffered no severe shock, and in forty-eight hours her pulse was 75, and temperature normal; she passed gas in thirty-six hours, has had no untoward symptom, and will make an uninterrupted recovery. The suppuration was probably due to traumatism during labor, and but for the omental adhesions the woman would have died from diffuse suppurative peritonitis, and had she delayed operation a little longer, rupture would doubtless have occurred notwithstanding these adhesions.

DILATATION OF THE STOMACH.

BY H. C. CROUCH, M.D.,

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Among the various pathological conditions of the stomach, one frequently wrongly diagnosticated, and even more frequently failing to meet the recognition of cause and consequences, is that known as dilatation. Any effort to bring more clearness into a subject, by no means necessarily so obscure as it seems at present, appears to me to require no further justification, and although I have very little to present that is actually new, nevertheless, some of the results of the more accurate methods of diagnosis in diseases of the stomach are sufficiently unfamiliar as to have as yet failed to find their place in the general works on medicine.

Dilatation, as a word, would seem to be self-explanatory. As a clinical entity, it requires much explanation. Any enlargement of the capacity of the stomach might seem to justify the term dilatation. Apart from the fact that an increase in capacity may be very apparent and yet be absolutely outside of the pathological, it may be remarked at the outset that the important factor in the conditions usually diagnosed as dilatation is not dilata-

tion at all, but stagnation; and as this is the one important fact in conditions which often differ widely in cause, and more widely still in dignity, we might do well to banish altogether the term dilatation, as representing a morbid entity. In fact Boas, in the last edition of his treatise, has actually done this. However, Klemperer remarks, it is difficult to banish a term so generally accepted, and which presents certain conveniences, so that if we are still obliged to use it, we may at least insist upon a more exact definition of the clinical meaning, and an emphasis of the fact that it is only a symptom, important only as associated with other things. Let us, then, endeavor to define the clinical meaning of dilatation. When, from any cause, food and liquors cease to pass from the stomach at the proper time or with sufficient rapidity or completeness, they stagnate and accumulate, producing an enlargement and distention of the organ, and this condition we recognize as dilatation. A very little consideration suffices to realize that stagnation is the important fact, and that only by recognizing its presence are we enabled to differentiate between a pathological dilatation and other conditions where the capacity of the stomach is increased, but which do not constitute a source of such serious harm to the organism. In fact, we may sometimes have a high degree of stagnation, producing all the phenomena associated with dilatation in a stomach not as yet enlarged, and which would fail to be recognized as dilatation. Stagnation, then, being the important factor, how do we recognize it, and when is it sufficient to be of importance? If the food at one meal fails to pass from the stomach before another meal is taken, it may be said that there is stagnation. This, however, often occurs when the interval is short. In a longer interval, particularly that between the evening and the morning meal, the stomach empties itself completely, and there is then no permanent stagnation. If, however, even in this interval the stomach does not become empty, the food stagnates, and the phenomena accompanying dilatation ensue. This, then, we may take as the principle in determining the existence of stagnation. When the stomach is not found empty in the morning, after one ordinary meal taken the night before, there is stagnation, and consequently, in the clinical sense, dilatation,—and usually in the mechanical sense as well. In practice, this is an extremely important part of the examination. An ordinary test-meal of bread, meat, and tea is given at the usual time in the evening, and the contents of the stomach, if there be any, are drawn off the following morning. In addition to the information relative to the motor function, important facts concerning the chemical functions result from such an examination.

Dilatation with stagnation being, as we have remarked, only a symptom, let us examine under what conditions it exists, and, first of all, what conditions are not, properly speaking, to be classed as dilatations. On ordinary examination, even simple inspection will often show the greater curvature in a position much below the normal. Palpation will demonstrate the position with some accuracy through the sound of succussion clapotage.

On the strength of this, dilatation is often diagnosticated. In dislocation of the stomach, descensus ventriculi, as it occurs most frequently in women who have borne children, and often associated with floating kidney, we frequently find such conditions. The dislocated organ is often very flaccid and somewhat enlarged, and yet, in the absence of the cardinal symptoms of stagnation, it would be a grave error to pronounce this dilatation. A condition even more frequently seen is that of muscular atony or myasthenia, and is met with particularly in neurasthenic and phthisical or ex-phthisical patients, the greater curvature reaching the umbilicus or slightly below when the stomach is full. Palpation elicits the sound of clapotage during the whole digestion period, and an examination may further show the presence of food long after the time at which it should normally be discharged. Such cases have been brought to me with the diagnosis of dilatation, and certainly in such cases there is, in a strict sense, dilatation. Yet during the night the stomach discharges its contents more or less perfectly. The important symptom of permanent stagnation, the source of the grave trouble in pronounced dilatation, is missing, and we must separate this condition as sharply as may be from the clinical picture of dilatation. The difference in gravity of these conditions is obvious, and yet the difference in kind is merely of degree, for conditions of myasthenia may become aggravated so that food is no longer discharged during the night, and we have then a form of dilatation due to stagnation and accompanied with the severer symptoms, the vomiting, the anorexia, the thirst, the emaciation, that make up the clinical picture of dilatation.

Dilatation may be considered due to mechanical insufficiency, the failure of the muscular apparatus of the stomach to discharge the contents completely. It is evident that this may be due either to the inability of the muscular coat to perform normal work, simple myasthenic dilatation, as already mentioned, or it may be due to an increased demand to which a normal muscular apparatus finally has become unequal. The most common cause of such a condition is found in some obstacle, particularly stenosis of the pylorus or duodenum, either cicatricial or consequent on some tumor, malignant or otherwise.

The determination of the nature of dilatation is of immense importance in reference to treatment. Above all, the question of surgical interference is to be taken into consideration in suitable cases, and such cases are constituted by conditions of stenosis and tumors. Particularly in cicatricial stenosis, the results of a well performed operation are among the most brilliant in abdominal surgery.

An exact diagnosis is consequently of immense practical importance, for, in addition to the question of surgical interference, appropriate treatment is very effective in alleviating and relieving the patient's troubles.

Let us, then, consider briefly the more common conditions, and the means of differentiating. Dilatation is most frequently one of three conditions. In the first place, it may be due to primary muscular insufficiency,

and is what we have referred to as atonic or myasthenic dilatation. In the second place, it may be due to cicatricial stenosis of the pylorus, or, exceptionally, the duodenum, following usually a gastric or duodenal ulcer, or the introduction of corrosive substances. In the next place, it may be due to a tumor of the stomach, ordinarily cancer, involving the pylorus. It may be remarked that in this case both of the factors producing dilatation are at work,—viz., a pyloric obstruction and a weakening of the muscular coat; for it is remarkable how early cancer affects the motor function of the stomach. Omitting, for the sake of brevity, the more uncommon conditions, where the obstruction is constituted by a tumor or inflammatory conditions outside of the stomach or duodenum, the means for differentiating these conditions alone may be considered here. Dilatation is due to carcinoma. The cause is easily enough recognized where there are a palpable tumor, advanced cachexia, the hemorrhage, and other classical symptoms. Unfortunately, such cases are usually hopeless. It is evidently of greater importance to have some means of at least suspecting the existence of malignant disease at an earlier stage. Important information is afforded here by a clinical examination of the contents of the stomach. In simple dilatation, either atonic or due to cicatricial obstruction, the contents show certain peculiarities on inspection. Usually copious, they are always in a condition of fermentation, and, in a glass vessel, show a characteristic division in three layers, and have a distinctly acid smell, like that of yeast or beer. If you examine you find that the contents of the stomach in carcinomatous dilatation undergo a decomposition rather than simple fermentation, are often offensive to the smell, and show either a very low amount of hydrochloric acid or none. Of value, especially in the earlier stages, is the presence of lactic acid, the importance of which in the diagnosis of carcinoma was first recognized by Boas. Contrary to the usual teaching, lactic acid, except as introduced in the food, is at no time present in the stomach in appreciable quantities. Lactic acid fermentation, to produce appreciable quantities of lactic acid in the stomach, requires two factors: the absence of hydrochloric acid and stagnation, both of which occur so much more frequently in cancer than in any other condition that practically the presence of lactic acid, when the proper precautions have been taken, justifies a strong suspicion of cancer. It is necessary, in the first place, to select for the test-meal a substance free from lactic acid. This, in accordance with the practice of Boas, is oatmeal gruel. The stomach is thoroughly washed out, the test of oatmeal is given in the evening, the contents of the stomach examined the next morning for lactic acid, either by the Uffelmann reaction, or, in doubtful cases, by Boas's aldehyde test. While the absence of lactic acid does not necessarily exclude cancer, the presence of lactic acid is very strong presumptive evidence of its existence. Microscopically, the abundance of sarcinæ and yeast in non-malignant dilatation, their greater rarity, and the presence of long zigzag-shaped bacilli, confirm the chemical examination. In addition, the course of the disease,

the age of the patient, and the existence of fugacious œdema assist in the differentiation.

It being possible in the majority of cases to distinguish between malignant and non-malignant dilatation, it remains to ask whether we can distinguish with equal certainty between idiopathic myasthenic dilatation and that secondary to a stenosis. It must be admitted that this is a most difficult problem. There are, however, certain points which materially aid in its solution. The history is important. The principal occasion of non-malignant stenosis of the pylorus being a precedent ulcer, a history pointing to such a condition, hæmatemesis, tarry passages, a circumscribed pain, which may likewise be present long after the ulcer is healed, would indicate a cicatricial stenosis. A greatly exaggerated and visible peristalsis is, when it is present, suggestive of an obstacle at the pylorus. In a certain number of cases, careful palpation may discover the cicatricial enlargement or bands of retracting tissue. The course of the disease is somewhat different. In myasthenia it is long in developing, there are frequent remissions, the degree of dilatation is less, and the response to treatment more prompt. Possibly this last condition is of the most value, for, when a rational treatment fails, the question of surgical interference must be raised, and, in such a case, an operation would be equally indicated in very severe myasthenic dilatation, and in a cicatricial stenosis.

A few words in reference to the treatment of dilatation. It is not my intention to go into the treatment at length. It may only be observed that washing out the stomach, a proceeding so often unnecessarily employed, and, in fact, so very often misused, finds here its principal field of usefulness. I have wished, however, to emphasize the surgical aspect of dilatation and the necessity for an early consideration of operative interference in all suitable cases. Even in cancer, where a radical operation may be hopeless, the relief afforded by gastro-enterostomy is so great that it is to be recommended in all cases of pyloric obstruction. The improved technique has made the operation of gastro-enterostomy in skilled hands one of the simplest of abdominal operations, and the reports from more recent operations by Hahm, Kocher, Murphy, and others give brilliant results. In carcinoma, particularly with pyloric obstruction, the advisability of the operation cannot be dwelt upon with too much emphasis. A permanent relief from the most painful symptom of stagnation, a prolongation of life, ending in an easy and painless death, a fading away, as it were, instead of a prolonged agony,—these more than justify such an operation.

CLINICAL LECTURES.

INTERNAL AND EXTERNAL URETHROTOMY.

CLINICAL LECTURE DELIVERED AT THE SOUTH SIDE (PITTSBURG) HOSPITAL, FEBRUARY 2, 1896.

BY J. D. THOMAS, M.D.,

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GENTLEMEN,—The first case I present to-day has the following history: "M. M., aged forty-three, Irish. About eighteen years ago, while carrying a hod, he was standing on a wall about eight feet high, when he slipped and fell, the wall gave way, and he lit astride a mass of rocks. Following this he suffered severe pain, the pain radiating from his right testicle up along the right side of his body. He consulted a physician, but derived no benefit. He then entered a hospital and remained for a few weeks, but, as he became continually worse, his right testicle was removed, as it had gotten so large that 'it ruptured his scrotum.' About ten years ago he acquired a gonorrhœa, which has never been cured, but it did not give him much trouble until four years ago, when he observed that he was unable to pass as large a stream from his urethra as he did formerly. About a month ago he fell from a ladder, a distance of nine feet, and was sent to a hospital; he remained in the hospital but a few days, as he only suffered from a 'shaking up.' After leaving the hospital the trouble in urinating became aggravated, and twenty days ago he was sent to Marshalsea,—the city almshouse. Thirteen days ago he was seized with retention of urine; an effort was made to enter the bladder, but failing to succeed, the medical gentlemen in attendance aspirated above the pubis, to relieve the over-distended viscus. This operation had to be repeated five times, when the patient was able again to pass his urine himself. Received in this hospital January 30, 1896."

On the evening of the day of his entering the hospital he suffered from retention, when the resident physician attempted to relieve him with a catheter, but failed to introduce the smallest instrument. He then sent for me, but, as it was not convenient for me to respond, I sent word to aspirate the bladder, and repeat the operation in the morning, if necessary. Gentlemen, the suprapubic aspiration of the bladder is a very safe operation, if the needle is pure and the surface to be aspirated is sterile. This being the

fact, you need never lose your heads when you fail to enter the bladder by the natural route. The object is to *save the bladder;* if you do this you can afford to wait until the proper time and condition arrives for you to treat radically the obstruction in the urethra. Of course, this rule does not apply when there is extravasation or infiltration of urine, which requires immediate action. When I made my visit to the hospital, the next morning, I found that it had been necessary to aspirate again, but I found the patient fairly comfortable, and with a normal temperature.

After getting the history of the patient, I made a systematic examination of the urethra. The circumference of the penis was three inches; this would give a urethra with an approximate measurement of thirty millimetres in circumference, as I have heretofore explained to you. The largest bulb admitted was a No. 18 French, which stopped immediately within the meatus. No. 11 passed through this and stopped at six inches. While passing the No. 11 bulb between the two points mentioned, I very distinctly observed that the entire urethra was irregular from inflammatory exudates. I then used bulbs of diminishing sizes until No. 8 was reached, but none would pass farther than six inches. I then resorted to soft bougies, and succeeded in passing a No. 5. This was removed and a No. 6 passed. After removing the No. 6, the patient arose from the bed and urinated himself. As the stream was small, it, of course, took him some time to empty his bladder. Since then (that was day before yesterday) the patient has emptied his bladder by his own efforts.

Now, gentlemen, this is a case that demands relief. If left alone, he will again have retention, his bladder will, in time, become inflamed, the trouble will pass to the ureters, the pelves of the kidneys, and, finally, the kidneys will become disorganized. Up to the present these organs are not damaged. It is useless to treat this case by gradual dilatation, because the whole urethra is infiltrated by a more or less dense inflammatory exudate, and these points of exudation are so numerous and close that you cannot locate them separately; hence I will incise the deepest contractions through the perineum, and the anterior ones within the urethra,—in other words, do an external and internal urethrotomy.

The patient being now anæsthetized, I fill the urethra with oil, and pass this filiform. You observe that it catches after passing about six inches. I now pass another filiform, which also catches. I take a third, which does the same thing. Before passing any more, I will manipulate these by withdrawing them slightly and separately, and again advancing them. I now find that one of these filiforms has entered the bladder. I know that it has entered the bladder because it slides to and fro smoothly: if it were in a false passage or a pocket or an open follicle, it would recoil. After removing the other filiforms I slide over this one a tunnelled sound, which passes down against the face of the smallest stricture. We will now have the patient brought to the edge of the table and placed in the lithotomy position. The perineum has been prepared beforehand. I now place my left

index finger upon the end of the tunnelled sound, to locate it, and cut along the raphé until the tip of the sound is exposed. By holding open the lips of the wound the dark filiform is visible at its bottom, passing from the end of the sound. I now follow this filiform for a short distance, cutting with the point of the knife. Laying aside the knife, I take this grooved director and insinuate it along-side of the filiform until it enters the bladder. The filiform is now removed, and along the groove in the director I make a free cut, along the floor of the urethra, in the direction of the prostate. Removing the director, I now pass my index finger into the bladder, dilating to a certain degree the membranous and prostatic urethra. As the anterior urethra is too small to admit the Otis urethrotome, I will be obliged first to pass this Maisonneuve urethrotome, bringing the point out through the perineal wound. With this instrument you cut from before backward. I place the blade in the slot, as you see, and push it downward until the blade is visible in the perineum, thus incising the entire floor of the urethra, from the meatus to the wound in the perineum. I now remove this instrument, and you see I am enabled to pass the Otis instrument, bringing its point also out at the perineal wound. The instrument is now opened until the urethra is put upon the stretch, when I draw the knife from behind forward, incising the entire roof of the urethra. Removing the Otis instrument, I take this No. 30 sound and pass it into the bladder with ease. Although a good deal of cutting has been done, the hemorrhage is not great, the only vessels requiring torsion being one or two superficially in the perineum.

The after-treatment of this case will be the passage of a full-sized sound into the bladder every third day until the wounds have healed. The urethra will be syringed with an antiseptic solution every day, and the wound in the perineum will be kept clean and douched with a bichloride solution, one to four thousand. I do not introduce a drainage-tube through the perineum and into the bladder unless there is some special indication for it. The dilatation given the deep urethra by the finger causes incontinence, and hence perfect drainage, for the first few days, and the urine passing over the wound keeps it thoroughly irrigated. My experience with these wounds, treated in this way, is most satisfactory. Sometimes the patients leave the hospital, perfectly well, in a little over two weeks.

The second case I present is that of C. J., aged thirty-two years. He denies ever having had gonorrhœa. His present trouble dates back about four years, when he was injured in a coal-mine by a fall of slate, the slate catching him in the back. After the accident he was unable to void his urine, when a physician was called in, who passed a metallic catheter into his urethra; while manipulating it a piece of the catheter broke off, or became detached, the patient does not know which, and it took an hour or two of hard work before it was recovered, after which the patient bled freely. Why there was retention of urine after the accident I do not know. The

injury did not appear to be a very serious one, for a physician was not called until the patient found that he could not urinate, and there is no history of blood passing from the meatus before instrumentation. It sometimes happens that patients who receive bruises about the lumbar and abdominal muscles are unable to void their urine when there is no actual injury to the urethra or bladder. It may be that in this case there was a rupture of the urethra, but from the history connected with the catheter I suspect that the injury to the urethra was done at that time; at all events, it impresses us with the lesson that our urethral instruments must be in good working order and manipulated with extreme care and intelligence.

Since that time the patient has had apparent incontinence of urine, but I think it was mostly due to overflow. For two years he has been obliged to be an outcast, from the fact that his garments are always saturated with urine, and when he succeeded in securing a boarding-house, after one night's lodging he would be driven off, owing to the condition in which he would leave his bed. Although he has been working the greater part of this time, he has been obliged to do the most of his sleeping in out-buildings. He says that he has consulted quite a number of physicians, but none were able to pass an instrument into his bladder. He finally fell into the hands of Dr. Bryant, of Washington County, who sent him to me, after failing in his efforts to pass the obstruction in the patient's urethra.

After the patient entered the hospital, an examination showed a healthy urethra, calibre 32 French, extending back seven inches, where the obstruction was encountered. The meatus was rather small. As it was proposed to treat the obstruction by external urethrotomy, very little effort was made at this time to pass the stricture, but enough information was obtained to satisfy me that there might be some difficulty in the undertaking.

On January 1, of the present year, he was anæsthetized, and after working with the filiforms for nearly half an hour I succeeded in insinuating one into the bladder. At this moment the patient ceased to breathe, and it required several minutes of pretty anxious effort before he began breathing properly. The ether was again administered and the patient brought to the edge of the table for operation on the perineum, when he again went into a dangerous condition, and artificial respiration and other methods were practised for some time before he was out of danger. Fearing to give the patient any more ether, I immediately did a modified operation. I passed a tunnelled Thompson's divulsor over the filiform that had been passed into the bladder, divulsed the stricture up to No. 20, and incised the meatus to No. 34, in order that gradual dilatation might be practised. Gradual dilatation has been done since then (a space of twelve days), with satisfaction, so that to-day a No. 28 can be passed.

Since I have been using the sounds, I have noticed that the point of the sound enters a pocket on the under surface of the urethra at the location of the stricture. At first a little difficulty was experienced in passing this pocket, as the point of the instrument entered it and was caught. By pass-

ing a finger into the rectum, then withdrawing the sound slightly and raising the point of the instrument with the finger in the rectum, I acquired the knack of passing the sounds readily. It was hoped that as the sounds increased in size the pocket would spread out and disappear, but it is just as marked with the No. 28 as it was with the No. 20. If this pocket did not exist, gradual dilatation would be continued until a No. 32 sound, the patient's normal size, could be passed readily.

You will find in your reading that the treatment of deep strictures by divulsion followed by gradual dilatation is almost universally condemned. Practically you will often find it an excellent method. I have performed it quite a number of times, and *always* with excellent results. It would be unsafe to permit this patient to go out into the country with this pocket in his urethral canal (although at the present time he believes himself to be perfectly well, being able to pass a large stream and to retain his urine for six hours), for if at any time it should become necessary to pass a catheter, it would probably catch in this pocket, and if the efforts to advance it were persisted in, a false passage would be made, and the patient again placed in a deplorable condition.

The patient is now ready, and you observe that he has taken the ether fairly well. The guide I shall use for this case is a No. 24 sound, with a groove on its convex surface, which will serve to conduct the point of the knife. Now you will observe where the instrument catches. I introduce my left index finger into the rectum, withdraw the instrument slightly (out of the pocket), lift its point with my finger-tip, and it glides in. As in the preceding case, my incision follows the raphé, the median line, and the point of the knife soon reaches the groove in the guide. I make a straight incision backward along this groove until I am satisfied that the pocket has been "cut out." I now take this No. 32 sound, and you see that it passes readily into the bladder. This sound will be passed every third or fourth day until the wound has healed.

The third case I bring before you is that of P. M., aged forty-nine. He gives a history of having had gonorrhœa a number of years ago. He has been treated for stricture by gradual dilatation in England. He entered the hospital on December 13, 1895, with the history of having had a gonorrhœa for five weeks. His first gonorrhœa he acquired twenty years ago, his second five years ago, the present attack being his third experience in this line. The discharge was not very profuse, and he was placed upon a zinc and lead injection. As the discharge did not cease, I examined the organ carefully. The circumference of the penis was three and one-fourth inches. The largest bulb admitted by the meatus was a No. 18, which stopped immediately; No. 17 passed for one and one-half inches; No. 15 stopped at six inches; No. 14 passed this and met with no further obstruction. Gradual dilatation was practised up to No. 18, when it was necessary to in-

cise the meatus, which was done to No. 34. Gradual dilatation was continued until No. 32, the full size, was reached.

Now comes the principal feature in this case. The stricture, which is located one and one-half inches from the meatus, being annular and one-half inch wide, still presents to the touch, when the sound is introduced, the sensation of a hard or fibrous ring. It is just as difficult to introduce the No. 32 sound through this contraction to-day as it was the first time it passed: the stricture recontracts; it is resilient. We have reached the limit in passing sounds, for we are up to the full calibre of the urethra. Every time we pass the sound now the stricture is simply pushed into the soft surrounding tissues. The only thing to do with this stricture is to cut across it, incise it, do an internal urethrotomy. The deeper stricture, which is at six inches, will not need incising, for it obeys the treatment by dilatation. If I were to incise it, I should do so through the perineum. Internal incision of these deep strictures is said to cause a great deal of trouble from hemorrhage. Personally, I do not know, for I have never so incised them. The stricture that I propose to incise is called one of large calibre. Some would ignore this stricture, believing that it could not interfere with the function of urination. A pathological lesion always interferes with the function of an organ. The urine is discharged in great part by the vermicular action of the urethra, and this indurated tissue interferes with that action. Besides this, if left alone, it will, in all probability, keep up a gleety discharge, and it will rapidly recontract. Will incising the stricture cure it? If done thoroughly it probably will. Cutting this induration permits a normal nutrition to take place, and makes it possible for the absorbents to remove it. You will notice the same principle in old ulcers of the leg with indurated margins. By splitting this induration transversely with a sharp knife, a healthy process is set up, and the induration *disappears*.

It is not necessary to give a general anæsthetic in this case: cocaine will answer the purpose perfectly. I have here one grain of the drug dissolved in two drachms of distilled water. I will throw into the urethra one-half of this, retain it for about five minutes, and then throw in the other half, allowing it also to remain a few minutes. The instrument commonly used for internal urethrotomy is the Otis dilating urethrotome, which I used in the first case to-day, and you saw how admirably it did the work.

Although the Otis urethrotome is recognized as possibly the best instrument presented to the profession for severing strictures of large calibre, it has, in my experience, three faults: first, that after the knife or blade is drawn forward and made to cut the stricture, it has to be pushed back; second, it must be readjusted for each stricture after the first is cut; and, third, owing to the fact that it opens on the principle of a parallel ruler, the adjustment is slightly altered after it is opened from what it was when first set for the stricture.

The first objection is the most serious one. Although it is intended, when the blade is pushed back, that it shall traverse the same line as was

made by the forward cut, in practice it does not do so, but goes back along a *new* line; for the loose character of the tissues of the penis makes this unintentional cut unavoidable, and, as the distal end of the blade is somewhat dull, it makes, in addition, the cut a lacerated one. The second objection is not such a serious one, but the readjustment takes time and necessitates needless and hence injurious manipulation of the urethra. The third objection is a trivial one,—but an objection, notwithstanding.

With my improvement, which is here described, these objections are all overcome. The rod slides to and fro in the slot in the upper bar of the instrument. The blade is slid forward on top of this rod, and, when the instrument is closed and ready for introduction into the urethra, the blade is beyond the end of the rod, down in the slot, and out of the way. The urethrotome is then introduced to the bottom of the penile urethra—to the bulb—and opened, regardless of the location of the stricture or strictures. The seat of strictures having been previously located, the rod is drawn forward until its extremity is at the point of deepest stricture, and fastened in place with the screw; then the blade is drawn forward, and, when it arrives at the extremity of the rod, it rides up on this and cuts the stricture. The rod is now released and drawn forward to the seat of the next stricture, and again fixed with the thumb-screw. When the rod is drawn forward the blade always drops into the slot and is out of the way, so that it can be drawn forward, and when it arrives at the rod it rides upon it and cuts the next stricture. When there are more than two strictures the same process is gone through with until all strictures are cut,—always cutting the deepest first.

It is not necessary to have any markings on the rod to indicate where the strictures are, for they can be located for the blade by deducting the distance from the meatus to the strictures from the length of the rod,—*e. g.*, if a stricture is at five inches, the rod being ten inches, five inches of the rod is left outside of the meatus, and when the blade is drawn forward it rises to exactly where we want it,—at five inches.

The improved instrument has another advantage over the original Otis,—when the blade and rod are removed it is easier cleaned.

Having had some experience with the instrument, I find it works admirably.

To know that the blade has dropped into the slot it is only necessary to draw the proximal end of the rod one inch beyond the same end of the knife.

I will now pass this instrument to the bulb. The far side of the stricture being two inches from the meatus, I adjust the distal end of the rod a little beyond that by having the proximal end of the rod seven and one-half inches from the meatus (I use this stiff rule), tighten up the set-screw, and draw the blade forward. The handle of the blade is now on a line with the proximal end of the rod and just ready to rise and cut the stricture. I now draw the knife forward for the distance of an inch, and I know the

blade entered a little on the far side of the stricture and stopped a little on the near side, splitting it. Now, instead of pushing the blade back, I release the set-screw, draw the rod out on a line with the proximal end of the blade-handle, and I know that the blade has dropped. I now remove the instrument and introduce a No. 32 sound. This sound will be introduced every third day for two weeks, and then at longer intervals if needed.

REVIEW OF MEDICINE.

MEDICINE.

IN CHARGE OF JOHN H. MUSSER, M.D.,
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The Genesis of Hereditary Syphilis. (*Archiv für Dermatologie und Syphilis*, 1896, vol. xxxiv., No. 1.) By Dr. Caspary, of Königsberg.

The author reports four cases that bear upon the question of placental transmission. In the first the husband infected his wife at the nipple during a relapse, after he had been wholly free from symptoms at the period of impregnation. The child was born at term and was apparently healthy, but on account of the sore upon the mother's breast it was artificially fed. It died at the age of four weeks of gastro-enteritis, and a careful autopsy failed to show any sign of syphilis in any organ. Obviously in this case the spermatozoa were not infected, and the placenta acted as an efficient protection against the syphilitic virus in the blood of the mother. In two other cases the women presented themselves at the clinic in advanced pregnancy, both suffering from recent lesions, and each declared that the father of the child was perfectly healthy. Both children were born apparently healthy, but both died in early infancy. Careful autopsies failed to reveal any sign of syphilis. In the fourth case the mother was infected in the fifth month and suffered from very slight secondaries. The child was syphilitic. Caspary concludes that the placenta interposes usually, but not invariably, an efficient barrier to the passage of the syphilitic virus. He next discusses the question as to whether these children are immune, and concludes from the consideration of some reported cases that probably they are not. He further declares that the converse of Colles's law has many exceptions.

Contribution to the Knowledge of Congenital Syphilis of the Liver in the New-Born. (*Wiener medicinische Wochenschrift*, February 22, 29, and March 7, 1896.) By Karl Hochsteiner, M.D.

The author studied one hundred and forty-eight cases of hereditary syphilis in children in the first year. Forty-six had enlarged livers that could be recognized clinically, and of these, thirty recovered and sixteen died. Post-mortem examination was made of five of the latter, and in one case the enlargement was found to be tuberculous. The size of the liver was very variable and usually the spleen was also enlarged. The other symptoms were chiefly florid syphilitic exanthemata, bone-disease, commonly manifest as a pseudo-paralysis and inflammation of the bones of the hands and feet, and invariably a purulent rhinitis. Icterus and ascites were never present, and usually their absence is also noted in the cases reported in literature. The author then examines a number of reported cases in which jaundice was present, and reaches the conclusion that, whenever it exists in connection with enlargement of the liver, other certain signs of syphilis are absent. This is true of three cases of his own, two of which ended fatally and one in complete recovery. Regarding the histology, "vasculitis" is the dominant morbid condition. The treatment used was iodide of mercury by the mouth, with most excellent results in a large proportion of the cases.

The Hæmotherapeutics of Syphilis. (*Therapeutische Wochenschrift*, January, 1896, No. 3.) By Professor Neumann, of Vienna.

As syphilis is a disease of the human race exclusively, all the conditions that are usually considered essential in the application of serum therapeutics are absent. The natural immunity of animals, however, leads to the attempt to utilize their serum for healing purposes. Certain doubtful beneficial results have been reported and many failures. It is, however, *a priori*, unlikely that any substances that are antitoxic to syphilis are contained in the serum of animals naturally immune. It was next attempted to produce a reaction and artificial immunity with the presence in the serum of a real antitoxin, by injecting into the lower animals blood drawn from fresh cases of syphilis or implanting excised chancres and other local lesions in their tissues. The serum thus produced seemed to possess a certain efficiency in curing secondary lesions, but the results were irregular and to some extent doubtful. It is important to decide whether the lower animals are inoculable. Experiments can only result in three ways: 1, negatively; 2, by producing symptoms of general intoxication; 3, by producing true syphilitic lesions. The last possibility is as yet unknown; if, however, the second occur and can be increased by reducing the resistance of the animals, it is not impossible that a serum can be obtained that has some therapeutic value. It has been contended that, as syphilitics in the tertiary stage are themselves immune, their blood must contain some antitoxic element which would possibly cure the disease or prevent its development in recent cases.

Against this contention is the doubtfulness of the immunity and the progressive and chronic nature of the disease. Numerous experiments have been made in this direction, with, as usual, conflicting reports. There seems to be more reason to hope that the attempt will be successful to use the serum of immune mothers to cure their syphilitic children, or the serum of children, born without lesions, of syphilitic parents. Finally, Neumann reports some cases of his own in which various forms of serum treatment were tried. The serum of lamb's blood was absolutely without effect in one case. Five cases were injected with serum from two tertiary syphilitics. Of these, two were made worse and three apparently improved, but all returned in more or less time with secondary eruption. The only conclusion is that all definitive judgments should be delayed.

Experiments with Serum Therapy in Syphilis. (*La Semaine Médicale*, 1895, p. 181.) By A. Gilbert and L. Fournier, of Paris.

The serum of animals naturally immune to syphilis appears to have no effect upon the course of the disease, and the same is true of the serum of tertiary syphilitics (method of Pellizzari), probably, the authors believe, because the quantity of antitoxin contained in it is too slight. Nevertheless, an attempt was made with the serum of two cases in the tertiary stage. In the space of twenty days three hundred and four cubic centimetres were injected into a patient in whom the secondaries were pronounced. Considerable improvement occurred in the general condition, but at the end of this period the roseolar eruption had not completely disappeared. An attempt was made to produce artificial immunity in animals, and some were inoculated with the blood of recent syphilitics, some with excised chancres, and some by both methods. Seventeen patients were treated with the serum obtained from these animals, of whom seven received at the same time the ordinary specific treatment, and ten did not. All of the first class showed slight amelioration; of the second class, five showed no benefit, and five were more or less improved; in one of them, indeed, there was complete disappearance of all the symptoms. They conclude that the serum treatment causes improvement in the general condition, disappearance of the headache and pains in the bones and joints, and attenuation or even disappearance of the cutaneous and mucous lesions, but that these results are not constant and invariable.

The Healing Properties of Erysipelas in Syphilis. (*Centralblatt für innere Medicin*, February 1, 1896.) By Dr. Rudolph, of Magdeburg.

The author believes, as a result of the study of two cases, that erysipelas may exert a very favorable influence upon the course of syphilis, but he doubts if an actual cure often takes place. The first patient, a man of fifty-two years, had acquired syphilis at twenty-three years, and when he came under observation suffered from chronic ulcers of the nose and supra-orbital region; nine days after the commencement of the erysipelas the

ulcers were healed. The second patient was a dressmaker that had been infected at twenty-one years of age. Four courses of mercurial treatment and huge quantities of potassium iodide had been without effect, and the patient was extremely cachectic, her glands were enormously enlarged, she was disabled by syphilitic rheumatism, and had also paresis of the left side of the face with tic convulsif. Five years after infection she had a severe attack of facial erysipelas, and upon recovery all the syphilitic symptoms were found to have disappeared, and she was able to resume work. A year later her general condition was still good, but a submaxillary gland was enlarged and there was a gumma on the right tibia. In both cases the intercurrent erysipelas produced more effect than energetic antisyphilitic treatment.

Preliminary Report Concerning the Physiological Action of Extract of the Suprarenal Bodies. (*Wiener klinische Wochenschrift*, February 27, 1896.) By Arthur Biedl, M.D., of Vienna.

In mammals whose medulla oblongata had been cut and subsequently the entire spinal cord extirpated, it was possible to raise the blood-pressure from zero to from 90 to 160 millimetres of mercury by the injection of the extract of the suprarenal bodies; and this elevation could be maintained for some time by renewed injections. The curve of the blood-pressure, as traced upon a manometer, shows a rapid rise, and in case of a single injection, a sudden fall; but continuous injections maintain the pressure at a high point until cardiac paralysis ensues. As the medulla and entire spinal cord have been destroyed, the action of the extract must be peripheral, but whether it acts upon the terminations of the vascular nerves or the muscles themselves Biedl has not yet determined.

Aseptic Traumatic Fever. (*Comptes-Rendus hebdomadaires de la Société de Biologie*, March 13, 1896.) By L. Pillon, M.D., of Nancy.

In order to determine this question M. Pillon performed a number of experiments upon guinea-pigs and rabbits, causing various injuries, such as contusions, fractures, subcutaneous hemorrhages, etc. In each case bacteriological examinations were made of the blood and of the liquids from the site of the lesion; the temperatures were taken in the rectum. He arrives at the following conclusions: (1) Traumatisms, similar as to site and intensity, cause different degrees of hyperthermia, even in animals of the same species. (2) The result does not depend directly upon the extent of tissue destruction, nor (3) upon the amount of hemorrhage. (4) Of all injuries subcutaneous fractures give rise to fever most frequently. (5) Neither the age nor sex of the animal nor the nature of the fracture has an absolute influence upon the elevation of temperature. (6) Intraperitoneal hemorrhage may give rise to a hyperthermia of 1° C. in twenty-four hours. (7) The following conditions seem to affect the genesis of the fever: (*a*) the absorptive power of the surrounding tissues; (*b*) the

nature of the effused liquids; (*c*) the degree of irritation of the injured tissues, the intensity of the local reaction, diapedesis, phagocytosis, etc. The author also reports two cases that came under his observation and that support his experimental work. The first was a man suffering from hæmarthrosis of the knee. The blood was carefully examined and found to be absolutely sterile, but contained a large number of leucocytes (1 : 6). The fever reached 39° C. The second patient had had his knee injured by a fragment of steel. Hydrarthrosis developed, and careful examination of the clear liquid by cover-glass preparations and culture were absolutely negative, although there were numerous leucocytes. The wound healed without reaction. The temperature exceeded 38° for several days, and then complete recovery ensued.

A Review of Polymyositis or Dermatomyositis Acuta. (*Centralblatt für Allgemeine Pathologie und pathologische Anatomie.*) By Richard Pfeiffer, M.D.

An examination of the literature reveals that very different symptom complexes are included in this term. Although the etiology is still unknown, it is nevertheless desirable to restrict the term as narrowly as possible, and the following symptoms are those that are most usually described. The disease begins suddenly or gradually and not infrequently with certain general symptoms, among which are headache, dizziness, weakness, and gastric disturbances. There is moderate irregular fever with a corresponding or increased frequency of the pulse and usually a splenic tumor. The important and characteristic local symptoms are the œdema and exanthemata of the skin in combination with the multiple inflammation of the muscles. The affected muscles are exquisitely painful, particularly at the attachment of the tendons. As far as may be determined by palpation, they contain foci of hard infiltration and areas of softening. At first the process begins in isolated groups of muscles, preferably in the extremities, and then, in its further extension, attacks the trunk. Usually the muscles of the eyes, heart, tongue, and the diaphragm are not involved, but in severe cases they may also be attacked. The lesions of the skin are manifest in copious sweating and the appearance of œdema and exanthemata. The latter occur in various forms (urticaria, erythema, roseolæ, herpes, and desquamative forms similar to psoriasis). According to Unverricht, it is characteristic, resembling urticaria, but differing by its obstinate persistence, whilst the deep red color more closely approaches that of purpura. It is located over the affected muscles, but not infrequently certain other parts are attacked, particularly the lower part of the abdomen. The œdema of the skin in association with the swelling of the muscles may cause complete deformity of the limbs (thick formless columns). The degree of involvement of the skin and muscles may be very unequal, one or other being less affected during the whole course of the disease; the inflammation of the muscles, indeed, may be so slight as to escape notice and only manifest

itself by the subsequent atrophy. That either should be exclusively involved, however, has not been observed. The nervous system is not affected: there are no disturbances of sensibility nor tenderness of the nerve-trunks. Stomatitis and inflammation of the throat may occur, but the joints are not involved, and the urine is free from albumin. The course is various, and complete recovery may occur after a brief or even a prolonged attack; in the latter case, however, atrophies of some of the muscles are apt to appear, with alteration of the electrical reactions. In very severe cases the muscles of respiration and deglutition are involved and death occurs by asphyxiation or lung-disease. This description applies to twelve recorded cases. A number of others have been reported that differ from this account in one or more particulars. Of the most interesting are the three cases of Lewry that occurred in the same family. The first was typical, the others had purpura as the chief symptom. The histological examinations seem to show that the disease is an interstitial myositis with secondary destruction of the fibres, but a few investigators (Leube-Rindfleisch) consider that the parenchymatous changes are primary. The cause is apparently some infectious principle. Pfeiffer believes the disease to be identical with the myositis gregarinosa of the lower animals, and Senator considers it to be an auto-intoxication from the alimentary tract. The differential diagnosis is most difficult from trichiniasis, and can only be made by a careful study of the history and the examination of the fæces or excised fragments. In neuromyositis differential symptoms are the tenderness of the nerve-trunks and disturbances of sensation. Less difficult are the polymyositis septica, syphilitica, and typhosa, and the polymyositis following alcoholic excesses or over-exertion. Pfeiffer concludes as follows: 1. The combination of lesions of the skin and inflammation of the muscles is not sufficient upon which to base a diagnosis. 2. The diagnosis is easy if the type as presented by Unverricht is accepted. 3. The existence of abortive and chronic forms requires further confirmation. 4. The cause is uncertain but an infectious agent is most likely. 5. Careful clinical, bacteriological, and histological studies are still necessary.

Early Diagnosis of Typhoid Fever by Bacteriological Examination of the Dejecta. (*Comptes-Rendus hebdomadaries de la Société de Biologie*, March 6, 1896.) By A. Chantemasse, M.D., of Paris.

A careful study of the different methods of discriminating between the bacillus coli and the bacillus of Eberth convinced the author that the method of Elsner is the most trustworthy. This consists in the employment of feebly nutritive media containing potassium iodide. The stools of two persons in good health, of a case of erysipelas, of two cases of la grippe, and of one case of pleurisy were examined by this method, with negative results. Three cases of typhoid fever were examined, once each, with like negative results, but there were certain unavoidable errors of technique. In thirteen cases of typhoid fever repeated examinations invari-

ably showed the presence of the bacillus of Eberth. By this means a positive diagnosis was made at the seventh day in eight cases, at the eighth, twelfth, and thirteenth days in one case each, at the seventeenth day in two cases, at the twentieth day in three cases, and at the nineteenth, twenty-first, twenty-third, and twenty-sixth days in one case each. In three of these cases the diagnosis would otherwise have been doubtful; thus, in one, after a brief febrile stage, only profound hysterical symptoms were present. The author contends that the typhoid infection is essentially benign, and that an early diagnosis is most important as regards the treatment. The analogy of typhoid to diphtheria led him to repeat, in connection with Widal, certain unsuccessful earlier experiments, and they succeeded in obtaining a virus of extreme power. With this virus they produced immunity in horses of the Pasteur Institute, and obtained a serum so powerful that one-fifth drop effectually protected a guinea-pig against a mortal dose of typhoid bacillus, but had no immunizing effect against the colon bacillus. Experiments upon healthy men having shown that this serum was innocuous, it was employed in three cases of typhoid fever, in all of which the bacillus of Eberth had been found in the stools. The injections were made at the twelfth, eighth, and ninth days of the disease, respectively, and in all three cases a steady fall of temperature occurred, such as occurs in abortive typhoid, until within a week, the temperature had become normal. Further communications are promised as soon as more extended experiments have been made.

A Case of Amœbic Dysentery and Liver Abscess. (*Wiener klinische Wochenschrift*, February 20, 1896.) By Franz Manner, M.D., of Vienna.

The patient had always lived in Vienna, and, at the time of admission, had suffered for a year from diarrhœa, with occasional bloody stools. He was much emaciated, and in the right hypogastrium there was increased resistance: this area was painful upon pressure, and a peritoneal rubbing could also be felt. The stools averaged eight *per diem*, and contained leucocytes, red blood-cells, epithelium, and some amœbæ. The temperature was high, with a morning remission. Five weeks after admission death occurred. A large abscess was found in the right lobe of the liver, filled with dark-brown pus containing amœbæ. The mucous membrane of the large intestine was swollen and injected, and interrupted by numerous ulcers, which in the rectum had begun to cicatrize. No amœbæ were found in the mucous membrane of the intestine, but they were numerous in the mucosa, excepting in the necrotic portions, even at some distance from the ulcers. In the muscularis a few were found in the neighborhood of deep ulcerations. The abscess in the liver consisted of numerous cavities, evidently of different periods. The oldest cavity was encapsulated; in necrotic parts non-nucleated oval bodies were found, about the size of amœbæ. In the necrotic areas, in the walls of more recent lesions, amœbæ were found in great numbers. A cat that had been injected with several cubic centimetres

of the fæcal discharge had bloody stools and died in a week. The mucous membrane of the large intestine was full of ulcers, and in their necrotic bases numerous living amœbæ were found. Amœbæ were also found in the intestinal glands, and occasionally they had broken through the glandular epithelium and lay in the surrounding tissue.

The unusual features of this carefully-studied case, to which Manner calls attention, are: the occurrence of amœbic dysentery in a native of Vienna, and the long course of the disease, death occurring finally as a result of the intercurrent hepatic abscess.

Parasitic Ictero-Hæmaturia of the Sheep; a Contribution to the Study of the Amœba Sporidium. (*Virchow's Archiv*, vol. cxxxix., No. 1.) By Professor A. Bonome, of Padua.

The clinical symptoms of the disease are weakness, refusal of food, fever, icterus, hæmaturia, and sometimes œdema of the neck. The gross lesions are parenchymatous degeneration and icteric discoloration of the organs. Microscopical examination of the blood from the living animals showed paleness of the red blood-cells and poikilocytosis. In the plasma and in many of the corpuscles were numerous small bodies that were actively contractile, and occasionally the intracellular forms left the cell. Their number was always proportional to the severity of the disease, but not to the degree of fever. When cover-glass preparations had been fixed by the vapor of osmic acid and heat, the basic aniline colors stained the organisms intensely, and often several were found in one cell. Microscopic examination of the liver, spleen, kidneys, and bone marrow revealed numerous organisms, many of them being in a stage of division; and this was found to be of the endogenous type, the organism splitting up into four, six, or eight small bodies that were contractile and did not contain pigment. Structurally, the parasite consists of a safranophile body in the centre, surrounded by a cyanophile (methylene-blue) substance. The histological changes in the liver consisted of an advanced cellular necrobiosis. A bacteriological examination of the blood and organs of a diseased animal was entirely negative, as were also the inoculation experiments,—the blood from a diseased animal in the acute stage being injected into a young sheep, a rabbit, and a guinea-pig.

Bonome believes that the organism enters with the food, and that it belongs to the group of amœbæ, despite the fact that he could find neither pseudopodia nor cilia, and he therefore proposes to call it the amœba sporidium polyphagium of sheep's hæmaturia.

Tuberculosis in Valvular Lesions of the Heart. (*Wiener klinische Wochenschrift*, February 20 and 27, 1896.) By A. R. v. Weismayr, M.D., of Vienna.

Rokitansky's celebrated principle that "venous congestion and cyanosis give rise to an eminent immunity against tuberculosis" is carefully com-

pared with the reported literature; and, although it is usually confirmed, nevertheless the two conditions are found to be not absolutely mutually exclusive. Thus Frommold found twenty-one cases of tuberculosis among two hundred and seventy-six cases of valvular disease, and v. Kryger, in eleven hundred autopsies of tuberculous patients, found ten cases of valvular heart-disease; and he found, also, fifty-nine cases of cured tuberculosis in the autopsies of cases of valvular heart-disease. Weismayr himself found six cases in the service of Professor Schrötter, which he reports as follows:

Case I.—A woman, thirty-seven years of age, and eight months pregnant, had had fever and cough for five months. Tubercle bacilli were found. The physical examination revealed, in addition to the pulmonary condition, a mitral regurgitation. Two weeks after parturition death occurred, and the autopsy showed a recent and an obsolete endocarditis that had caused a double lesion at the mitral orifice, and a chronic infiltrating tuberculosis, with cavity formation in the left apex.

Case II.—A man, thirty-five years of age. Seven years previously, after an attack of articular rheumatism, he had had palpitation of the heart and œdema of the extremities; a few months prior to admission cough and fever had occurred. The physical examination showed cold abscess over the sternum, mitral and aortic insufficiency; no bacilli were found. Subsequently tuberculosis of the epididymis developed.

Case III.—Man, nineteen years of age; he had had rheumatism at twelve years, and later an old valvular lesion had been diagnosed. Cough had commenced about a year before admission. The diagnosis was double lesion of the mitral orifice and tuberculosis of the right lung. Tubercle bacilli were found.

Case IV.—Woman, fifty years of age. Three years before admission palpitation had commenced. The clinical diagnosis was aortic insufficiency. The autopsy confirmed this, and showed, in addition, chronic tuberculosis of both lungs.

Case V.—Man, sixty-four years of age. Six months previously he had been treated for lancinating pains in the breast. The clinical diagnosis was mitral and aortic insufficiency and infiltrating tuberculosis. The bacilli were found in abundance.

Case VI.—Man, forty years of age. About six months ago his sickness had commenced with gastric disturbance; since then he has grown worse. The clinical diagnosis was insufficiency of the aortic valve, pulmonary tuberculosis, and chronic nephritis. The autopsy showed an obsolete endocarditis, with retraction of the aortic valves, chronic tuberculosis, and caseous peribronchitis; universal œdema.

Of these six cases three were confirmed by autopsy, and in the others the cardiac lesion was undoubted, as there were diastolic and systolic murmurs, and increase of the area of cardiac dulness. In Cases III. and V. tubercle bacilli were also found; in Case II. they failed, but the physical

signs were characteristic. In four of these cases the cardiac lesion certainly preceded the development of the tuberculosis; in Case IV. the tuberculosis was chronic, and had produced no symptoms; in Case V. it could not be ascertained when the heart lesion had commenced. Classified according to the valvular lesions, there occurred two cases, each of double lesion at the mitral orifice, of combined insufficiency of the mitral and aortic valves, and of aortic insufficiency. In three of the cases the course of the tuberculosis was decidedly chronic; in the others it was rapid.

Weismayr concludes, like a loyal Viennese, that the old principle of Rokitansky still holds good. He urges that six cases in the large service of Professor Schrötter is an infinitesimal proportion, and the fact that, in three of these, the tuberculous process was essentially chronic, shows that hyperæmia of the bronchial mucous membrane is unfavorable to the growth of the bacilli. From such a small number of cases it is impossible to dogmatize; but it seems to be indifferent whether the aortic or mitral orifices are affected, whilst involvement of both seems to exert a more retarding influence.

The Phonendoscope of Dr. Bianchi. (*Comptes-Rendus hebdomadaires de la Société de Biologie*, March 6, 1896.) By Ch. Compte, of Paris.

The phonendoscope is an instrument designed to permit the combined use of percussion and auscultation. It consists of a shallow metal cup, covered by a thin disk of ebonite, with a perforation in the bottom of the cup, to which is attached a bifurcate tube furnished with two long rubber tubes for the ears. From the centre of the disk of ebonite, or better, from a second disk that covers and protects it, arises a little rod, five or six centimetres long, with a button at the end. In use this button is placed over the organ to be explored, and from the point of application towards the periphery the finger is rubbed on the skin. Whilst still within the limits of the organ the bruit is loud and distinct, but the moment that the limit is passed it diminishes markedly in intensity. Not only is it possible to outline an organ by this method, but Dr. Bianchi contends that it is even possible, with practice, to recognize the different cavities of the heart and the position of the septum, and of the interlobular fissures of the lung. The change in the sound is so pronounced that even persons whose hearing is not very acute may outline accurately.

THERAPEUTICS.

IN CHARGE OF ALEXANDER D. BLACKADER, B.A., M.D.,
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ASSISTED BY
D. J. EVANS, M.D.

Thyro-iodine. (*Zeitschrift für physiologische Chemie*, vol. xxi., 319.) By Professor Baumann, of Freiburg.

Chemical investigation of the thyroid gland, in conjunction with clinical trial of the product by Dr. Roos, has led to the important result of obtaining from the thyroid glands of sheep a product amounting to from 0.2 to 0.5 per cent., which possesses, in a high degree, the peculiar therapeutic activity of the gland, and which is almost as powerful as a corresponding quantity of the fresh gland. One of the most remarkable characters of this constituent of thyroid gland is that it is an iodine compound. According to the account given by Baumann, thyro-iodine is described as an amorphous brown powder, almost insoluble in water, and readily soluble in alcohol. It is readily dissolved by alkalies, and is again precipitated on adding an acid. When heated it swells up and gives off an odor of pyridine. Thyro-iodine does not give any of the reactions of albumin; it always contains phosphoric acid corresponding to 0.4 to 0.5 per cent. of phosphorus, and, possibly, it may be a product derived from the nuclein acids of Kassel. By repeated purification a product has been obtained containing no less than 9.3 per cent. of iodine, but the proportion of phosphorus was not equally increased. Examination of the human thyroid gland showed that it contains a similar iodine compound in the normal condition, whereas in cases of goitre, the amount of iodine appeared to be smaller. The discovery of this organic iodine compound appears to throw a light upon the use of iodine in the treatment of affections of the thyroid gland, and it offers an explanation of the fact observed by Kocher, that preparations of thyroid gland are much more rapidly effective than saline compounds of iodine. It is suggested that this difference is analogous to that observed in the assimilation of iron when administered in the form of organic compounds and in organic salts, etc. (*Pharmaceutical Journal*, February 29, 1896.)

The Treatment of Hysterical Anorexia by Hypodermic Injections of Morphine. (*Le Progrès Médical*, February 22, 1896.) By S. Dubois, M.D., of Saujon.

Sometimes hysterical anorexia resists all treatment and results in death. In such cases the patients become extremely emaciated, they present a dry, wrinkled, cold skin, a small, rapid pulse, and a dry, sooty tongue. Such patients may receive hydrotherapy, isolation, hypnotic suggestion, gavage, and intra- and extrastomachal electrization without result. The author had three cases of this description, and, after conscientiously employing the

methods of treatment detailed above, and when consultants agreed with him in a fatal prognosis, he began to treat the patients by the hypodermic injection of morphine. At first he injected three centigrammes (about one-half grain) of morphine at four-hour intervals, until three doses had been given, or until he had produced paralysis of the stomach wall; in two cases three doses accomplished this result. He tells the patient that she will become numb, that her pains will diminish, and he assures her that she will be able to take and retain the food that will be given to her a half hour after the injection. He insists upon two points in this method of treatment: first, that the injections be given at the same hour each day, and that they be followed in a half hour by the administration of food, either with gavage or without gavage; second, that the patient be assured that the food will be retained, and that it will not give rise to pain. The only patients which one is authorized to treat by this method are those who have arrived at such a state of organic debility that hypnotic suggestion, while possible, is not lasting in effect. After having used morphine in the manner indicated, these patients become hypnotizable and suggestionable in a few days. If such patients are finally cured, it is not from the medicinal action of morphine, but from the influence of psychical treatment, which was insufficient and ineffectual before the use of the hypodermic injections. The diminution of the dose of morphine should be made progressively as soon as alimentation and assimilation have been sufficient to augment the body weight. If the treatment is well directed and if psychical treatment is thoroughly carried out, a cure of these stubborn anorexias ought to be made in less than three months.

[This treatment has always the danger of producing morphomania in the patients on whom it is used. Carefully followed out, as indicated by Dr. Dubois, this danger is at its minimum. The weak point in the treatment is that there will be a great temptation to use it before other means have been thoroughly tried, and in the hands of men of loose methods it would be productive of infinite harm. It is not, therefore, a method to be advised indiscriminately.]

Concerning Applications of Picric Acid to the Therapeusis of Burns. (*Gazette des Hôpitaux*, January 18, 1896.) By Dr. Thiéry.

The author sums up the advantages of treating burns with picric acid applications as follows: Picric acid is a local remedy which is analgesic, antiseptic, and ceratoplastic. It presents no danger of explosion; it is odorless; it is neither caustic nor toxic, and it may be used in cases of burns occurring in children. Its saturated solution is easy to prepare without weighing, since the operation can be finished by decantation; it never alters. A very small volume of crystallized picric acid represents a considerable quantity of solution. The cost is the lowest. In military surgery picric acid is applicable to many other conditions. The dressing is very simple to apply. It is a thin dressing. Cure is effected in a con-

dition of analgesia and with a rapidity scarcely customary. The cicatrix is small. One inconvenience is that the dressing discolors the hands and the clothing, but linen ought to be easily decolorized, and the first inconvenience may be overcome, thanks to certain precautions in the technique.

In applying the dressing of picric acid it is necessary to thoroughly clean off any greasy dressing, such as carron oil, that may have been applied. The remedy may be applied in one of two ways: first, by immersion in a picric acid bath; and second, by compresses wrung out of the solution. The immersion in a cold or tepid solution ought to last from five to ten minutes, and is only practicable in cases of burns of the first segment of the extremities. After the bath, the limb should be covered with dry cotton if all the epidermis is preserved; if the epidermis is destroyed a light layer of sterilized gauze will keep the cotton from adhering. This dressing may be renewed at the end of three or four days. In applying compresses wrung out of the solution it is necessary to cover them with dry cotton; because, in order to derive the greatest benefit, the dressing should be dry. Layers of rubber cloth placed between the cotton and the compress will give poor results. In order that the cure be as rapid as possible the dressing should be applied at the moment when the accident is received and the burn should not have been previously treated.

I. A Trial of Thyroid in a Few Cases of Insanity. By Ales Hedlicka, M.D. **II. On the Use of Thyroid Extracts in Mental Disease.** By Warren L. Babcock, M.D. **III. Thyroid Feeding in the Insane.** By Willard Hospital Medical Staff. (*State Hospitals Bulletin*, January, 1896.)

I. The use of thyroids in the various forms of mental derangement has been made the subject of special investigation in three of the New York State hospitals for the insane, and the results, to date, are published in the *Bulletin*. In the Middletown State Hospital (homœopathic), Dr. Hedlicka (I.) has used thyroid tablets in four cases of general paresis, one case of suicidal melancholia, one of primary dementia, one of dementia following acute melancholia, one of puerperal insanity, one of paranoia, and three of secondary dementia. All these patients were free from respiratory or circulatory disorder. The treatment extended over two months, and was begun with the administration of five grains daily, and was gradually augmented to twenty-five or thirty grains daily. Among the effects of the drug the following are recorded: Both the pulse and respiration increased in frequency, but this increase was never extensive. There was an increase in temperature of one or two degrees. The appetite improved. The bowels were regulated, and in several cases diarrhœa was produced. The elimination of urea was increased. The majority of patients lost weight while under treatment. Regarding the mental symptoms there was noted, under moderate dosage, pronounced general psychical improvement, the mind became clearer, more active, and the manner livelier. Sleep was improved. When

the dose surpassed the moderate mark, as a rule, symptoms of irritation appeared. While under treatment, one of the cases developed a left brachial monoplegia, without apparent cause, which disappeared without special treatment. The case of puerperal insanity was cured. The case of suicidal melancholia, that of dementia following melancholia, and two of the cases of secondary dementia were temporarily improved. The case of primary dementia grew worse. In the cases of general paresis but few temporary ameliorations were noticed. The author considers the remedy more as an alterative of great value than as a curative drug.

II. Dr. Babcock experimented with desiccated thyroids at the St. Lawrence State Hospital with three main objects in view: first, to definitely ascertain the physiological action of thyroid; second, to determine thereby in just what classes of cases it might be used to further recovery; third, to apply it therapeutically to those cases in which it offers the best results. This observer determined that extracts made from the thyroid gland have a definite physiological action; that an unvarying strength of any given amount can be obtained by proper preparation; and that the true thyroid preparations have no relationship with the so-called animal extracts. The treatment was begun by the administration of five grains of desiccated thyroid extract, and this dose was increased judiciously. Fifteen grains seemed to be the maximum dose that could be given with safety for any length of time, and then only in patients whose physical health was impaired in a slight degree if at all. The physiological action of the drug may be summed up as follows: The number of red blood-corpuscles per cubic millimetre and the percentage of hæmoglobin were increased. In the majority of cases arterial tension was increased, in a small proportion the blood-pressure was diminished. Precordial oppression occurred in a few cases. The pulse was accelerated, the respirations were not especially influenced. The temperature in the majority of cases was elevated from one to three degrees. In one case the temperature was subnormal. Myasthenia was pronounced in the majority of cases at an early period of treatment; flaccidity, tremor, and general weakness characterized these cases. The early development of a feeling of apprehension, together with some mental and much motor restlessness, was noted, usually during the third day. At first there was an apparent sense of fatigue with great mental oppression, followed by a gradual clearing up of the cerebral processes and improved mental co-ordination. The reflexes, in the majority of cases, were increased and exaggerated from an early period of the treatment. In nine cases presenting more or less anæsthesia, the sensibility returned to normal or was very much improved. Two cases became hyperæsthetic. Diuresis was well marked in many cases, and perspiration was decreased. A few of the cases presented varying degrees of gastric symptoms. Urticariform eruption accompanied by severe itching, followed by scaling and desquamation, was observed in two cases. The elimination of the products of retrograde metamorphosis was greatly increased. Thyroid holds out prospect of recovery

or improvement, first, in cases of post-melancholic hebetude following a lengthy period of depression; second, in cases of stuporous melancholia of long duration; third, in maniacal cases whose attacks have been unduly prolonged; fourth, in cases of cerebral exhaustion following acute delirium or stupor in which the elimination of urea and other nitrogenous compounds is greatly reduced; fifth, in chronic disturbed cases; sixth, in doubtful cases thyroid may assist in differentiating between true stupor and dementia; in delusional cases it will show whether the delusions are fixed or temporary.

III. The medical staff of the Willard State Hospital have been using thyroids in a variety of mental disorders, with results corresponding to those already indicated in the foregoing papers.

The Treatment of Hyperpyrexia in Children, with Some Illustrative Cases. (*Medical Record*, February 22, 1896.) By Louis Fischer, M.D., of New York.

In the treatment of hyperpyrexia in children, the author, after enumerating the dangers of the antipyretics now in use, recommends a new antipyretic and analgesic, apolysine. Apolysine is not poisonous. It is split up in the human organism into para-amido-phenol and para-phenetidin, ethyl, and citric acid, which, as is well known, are oxidized into carbonic acid and water. Para-amido-phenol and para-phenetidin,—*i.e.*, the group in which one hydrogen atom of the amides (N_2H_2) is substituted by citric acid, produces lower temperature, whereas the ethyl has the analgesic action. The substances are found in the urine either as glycerose combinations or as sulphate salts, which can be proved by chemical examination. Five grains of apolysine may be given to a child of one year and repeated every two or three hours, the intervals depending on the urgency for reduction of hyperpyrexia. If there is no distinct effect noticeable from the five-grain dose after three doses, it is perfectly safe to give doses of ten grains each, every two hours, until the fever has been reduced. Apolysine is applicable for the reduction of high temperatures in any and all affections in which antipyretics are required. The drug may be given by the rectum.

It has been used with good results and without the production of subnormal temperature for the control of hyperpyrexia accompanying influenza, measles, pneumonia, acute gastritis, rheumatism, and typhoid fever.

SURGERY.

IN CHARGE OF HENRY R. WHARTON, M.D.,

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JOSEPH P. TUNIS, A.B., M.D., AND J. P. ARNOLD, M.D.,

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The Radical Treatment of Hernia and its Present Status. (*St. Petersburger medicinische Wochenschrift*, No. 50, 1895.) By Wilhelm Grieffenhagen, M.D.

The number and variety of operations now practised for the radical cure of hernia are evidence of the fact that no operation is ideal, at least for every case and every operator. The newer methods seem, however, to produce better results, so that the mortality by non-incarcerated herniæ, which are not complicated by a resection of the mesentery or intestine, has diminished from 11.5 per cent. in 1887 to nothing at the present day, numerous operators reporting long series of cases without a single death. The radical operation for non-incarcerated herniæ may, therefore, the author believes, be said to be a harmless operation.

But this is not all that is to be desired. What are the final results, especially in inguinal hernia? In 1874 the percentage of recurrence varied between thirty and forty per cent., to-day it is from ten per cent. to nothing, the best statistics being shown to follow the Macewen and Kocher methods. That is, we may say, that allowing for the short time some of these cases have been under observation, the results, so far as permanent cures are concerned, are nearly all that could be desired, and the two chief objects of the operation are assured,—it is harmless and it produces a radical cure.

This is the present status of the operation, and its influence is felt in the change which it has made in the indications for the operation. Unquestionably, all herniæ that cannot be replaced, or are held up with difficulty, should be operated upon if they have ever shown even a slight tendency to strangulation.

The radical operation is further indicated,—

1. In every free hernia in which the truss is not sufficient or only holds up the hernia with difficulty and is a burden to the patient.

2. In middle-aged and young persons of the laboring classes, who cannot afford to buy and renew good trusses as often as needed.

3. According to the latest statistics hernia in children should always be operated upon, especially when the herniæ are large.

4. The wish of the patient to be operated upon, in order to be rid of a truss, is sufficient ground for operating, and patients should be told that the operation is harmless and will produce a lasting result.

Contra-indications are herniæ so large that the abdomen will not contain the contents, and any disease of the system that precludes all operations.

The best results are obtained in small, free, and recent herniæ. Early operation is therefore the best for the patient. The more adhesions that have formed between the hernial sac and the tissues, the greater will be the technical difficulty in operating.

The various methods are applicable to the different forms of herniæ; the author uses Macewen's and Kocher's by preference.

The Treatment of the Wandering Spleen by Splenorrhaphy. (*Archiv für klinische Chirurgie*, No. 3, 1895.) By W. Lykoff, M.D.

The author, after studying with great care the existing literature concerning the function of the spleen as a blood-producing and blood-purifying organ, shows that the progress and development of our knowledge in this direction is limiting the field in which splenectomy is allowable, and that the present indications are for the preservation of the spleen so far as is possible, and, at least, by means of other operations, as splenorrhaphy and splenotomy, to avoid the results which come to the organism from the loss of the important functional power of this organ.

The author summarizes the results of his experiments in methods of fixation of the spleen as follows:

1. By the employment of a catgut net it is possible to fix the spleen firmly and certainly to the abdominal wall.

2. It is sufficient to fix the middle half of the organ.

3. The contraction of the newly-formed tissue contracts the spleen somewhat.

4. The function is not altered.

5. The catgut threads play the principal *rôle* in the fixation, for, in place of them, connective-tissue fibres form.

6. Any form of irritation or scarification of the surface of the spleen is harmful, as it does not materially increase the amount of fixation, and makes suppurating more easy if the catgut has not been carefully sterilized.

In regard to the physiological function of the spleen, his experiments lead him to make the following *résumé*:

1. In order that the extirpation of the spleen may be followed by favorable results, it is necessary that the other blood-making organs should be in perfect functional activity.

2. In the place of splenectomy, in cases of local lesion, splenotomy with partial resection should be employed. This is made possible by the employment of steam to check hemorrhage.

3. Splenectomy is indicated when the spleen is the seat of a primary and not secondary growth, which threatens to involve the entire system, and in cases where the pathological change is so great that the hope of a return of function cannot be entertained.

4. The floating spleen can and must be fixed.

5. The spleen held in the catgut net has all its normal functions.

6. It decreases the size of the spleen, a fact that is of value in cases of hypertrophy.

7. The prolapsed spleen should be replaced and fixed in position, if possible.

The Treatment of Angeiocholitis and Cholecystitis of Infectious Origin. (*Revue de Chirurgie*, December, 1895.) By Felix Terrier, M.D.

After a critical discussion of the different modes of treatment employed for these conditions, and a careful study of the best methods of procedure, the author summarizes his views in regard to their treatment as follows:

1. Where the biliary ducts are the seat of an inflammation which produces intense febrile symptoms, either with or without the presence of calculi, which are continuous or subject to exacerbations, there is an absolute indication for surgical intervention by laparotomy.

2. This laparotomy should have for its object the opening of the gall-bladder and the permanent establishment of a biliary fistula,—that is, it should be a cholecystotomy.

3. The results produced by this operation are: a clear understanding of the condition present in the accessory bile-ducts (the cystic and vesicular); the principal bile-duct (*ductus choledochus*) can be explored; free exit is given to the septic bile contained in the bile-ducts and infecting from thence the entire system.

4. This free exit for the septic bile produces, in a certain indirect and mechanical manner, the disinfection of the bile-ducts, and one that is much better than those employed in purely medicinal methods of treatment.

Catgut Sterilization by a New Process. (*Berliner klinische Wochenschrift*, January 13, 1896.) By E. Saul, M.D., of Berlin.

The superiority of catgut as a suture and ligature material, which it possesses on account of its absorbable nature, led the author to study experimentally to find a process by which it could be rapidly and certainly rendered sterile without destroying any of its valuable characteristics.

Basing his research upon the work of Répin and others, he studied the effect of boiling alcohol in different concentrations and with the admixture of other ingredients, desiring to lower the boiling-point and shorten the time required for complete and certain sterilization. After testing various mixtures he finally determined, by exhaustive experiment, that the following mixture produces the most certain results in the minimum amount of time.

Alcohol (ethyl alcohol), 85 parts; acid carbol. liquefact., 5 parts; aqua destillata, 10 parts.

An apparatus is requisite which maintains the solution in its original concentration and prevents excessive pressure, while keeping the boiling-point at the same degree of temperature.

Catgut, when boiled in this solution for fifteen minutes, is absolutely

sterile and its quality is uninjured, while experiment has shown that five minutes' boiling is sufficient to destroy the spores of anthrax. The catgut may be used immediately after sterilization.

The Surgical Treatment of Cancer of the Stomach. (*Revue de Chirurgie*, No. 10, 1895.) By Professor Quénu, M.D., of Paris.

The author reports two very interesting cases, which amply justify, by their results, the surgical interference proposed. In one case, after pylorectomy and gastro-enterostomy, the patient was relieved from all symptoms and regained health and strength, but died one year later after a recurrence. In the other, a gastro-enterostomy relieved the patient's symptoms and produced a marked amelioration in the general condition. He believes that the presence of a suspicious induration in the gastric region, accompanied by dyspeptic symptoms, justifies an exploratory incision.

The fact is again noted that these cases are generally brought to the surgeon too late for permanent relief.

The following are the rules which guide him in these cases. Make an exploratory laparotomy, find out the exact location and character of the growth, and then judge whether interference is justifiable or not.

1. If the cancer of the pylorus is non-operable, is too diffuse, has involved too many lymphatics, or is too adherent, perform, as a palliative measure, a gastro-enterostomy.

2. If the cancer is operable, perform a gastro-enterostomy, and then, eight or ten days later, resect the pylorus and remove the tumor.

This method of procedure, the author believes, has the following chief advantages: the secondary pylorectomy can be done more rapidly, while the gastro-enterostomy permits the building up of the patient before the more serious operation.

OPHTHALMOLOGY.

IN CHARGE OF CHARLES A. OLIVER, A.M., M.D.,
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AND
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A Contribution to the Pathology of Embolism of the Central Artery of the Retina. (*New York Eye and Ear Infirmary Reports*, vol. iii. part 1.) By Wilbur B. Marple, M.D.

The accompanying phototypes are so instructive, and cases of this character are so seldom examined microscopically, that a detailed account of both the clinical symptoms and the pathological changes here found has been deemed of sufficient importance to present in full.

The patient, a fifty-two-year-old Jewess, suddenly lost the vision of the left eye in September of 1893. Two days later, Gruening, of New York, found the characteristic ophthalmoscopic appearances of embolism. At this time vision was reduced to mere perception of light. In seven weeks' time she returned with the statement that she had been bedridden with articular rheumatism during the intervening period, and that three or

FIG. 1.

Appearance of embolus.

four weeks before this visit her bad eye had become persistently painful. At the time of the second examination there were all the evidences of an acute and excruciatingly painful attack of secondary glaucoma. The eye had become absolutely blind. As physical examination revealed a serious cardiac lesion, and as the kidneys were found to be affected, cocaine was used as a local anæsthetic, and the eyeball was removed.

The eyeball was hardened in Müller's fluid, placed in alcohol, and mounted in photoxyline. The optic nerve was cut off close to the globe, and mounted separately. The globe was divided by a horizontal section made just above the nerve, and sections were so arranged as to pass through the nerve.

Macroscopical examination showed that the antero-posterior diameter of the globe was twenty-four millimetres; the vertical diameter being one-half a millimetre less, and the transverse diameter one-half a millimetre more. The vitreous was coagulated. The depth of the anterior chamber

was fourteen and one-half millimetres, and the pupillary width equalled three and one-half millimetres. The intervaginal space of the optic nerve was considerably dilated. Forty or fifty complete meridional sections, passing through the nerve entrance, were secured and arranged in series for

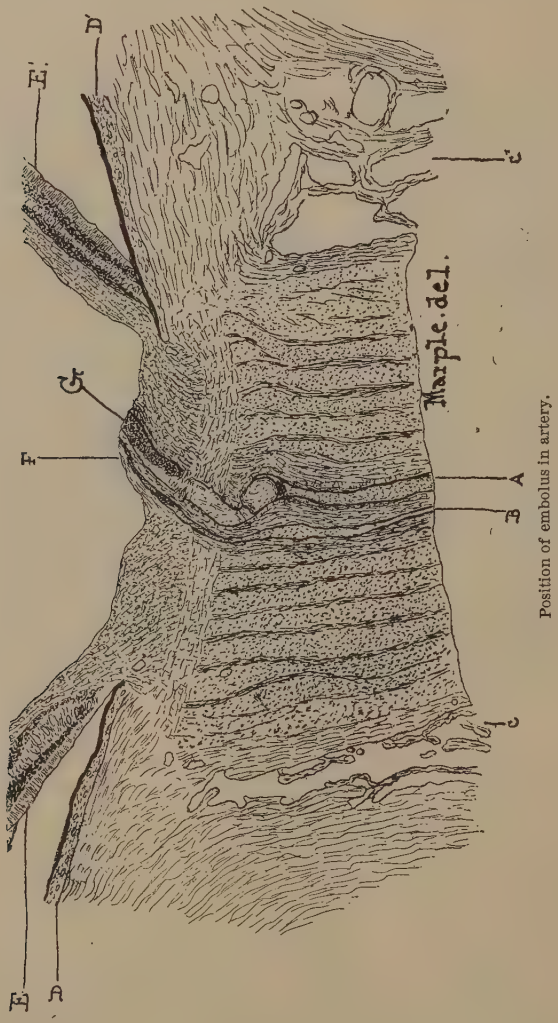

FIG. 2.

examination. They were stained in eosin and hæmatoxyline. Two or three of the sections passing through the middle of the nerve showed the appearance of an embolus immediately back of the lamina cribrosa. The plug itself measured one-seventh of a millimetre in length and one-ninth of a millimetre in diameter (see Fig. 1). The embolus was apparently

hyaline in character, and showed but little structure. It was stained with hæmotoxyline. As shown in Fig. 2, the plug had been caught just in advance of a sharp bend in the vessel as the vessel ascended to the papilla. In this position the lumen of the vessel was reduced to hardly more than one-half of what it was in front and behind this point. At the seat of the embolus the vessel was completely occluded. Almost filling the vessel as it ascended on to the papilla there was a mass of red blood-cells. Back of the embolus there was a well-organized thrombus which almost completely filled the vessel (see Fig. 3.) The intima of the vessel was hyper-

FIG. 3.

Section of arteria centralis retinæ back of embolus, showing the organized thrombus. A, muscularis; B, intima; C, organized thrombus.

trophied and showed much increase of nuclei. The papilla itself, which was one and one-half millimetres in diameter, was, if at all, excavated to but a trifling extent. There was a marked increase of nuclei throughout its tissue.

Transverse section of the optic nerve showed a condition of pronounced interstitial inflammation. There were not any marked vascular changes except as above noted. As stained with Weigert's hæmotoxyline, the nerve was found to be entirely atrophied and none of the fibres remained darkly stained.

In the retina there were no apparent changes in the pigment epithelium. The rods and cones were apparently normal, the principal changes were found in the inner layers. The ganglion cells had disappeared, leaving but a few nuclei remaining. The fibre layer did not show any fibrillation except near the papilla, and for some distance on each side of the papilla the fibre layer was thickly infiltrated with cells. At this portion the retina was markedly œdematous, showing numerous varicosities, at which places the membrana limitans interna was elevated. (See Fig. 4.)

The iris was atrophied, and the iris angle was closed.

By careful search through the literature of the subject the author has found that fourteen cases previous to the one that he has detailed have been described. In four of these no plug of any sort could be found.

FIG. 4.

SECTION OF RETINA.—*a*, layer of rods and cones; *b*, external granular layer; *c*, outer reticular layer; *d*, inner granular layer; *e*, layer of ganglion cells (no ganglion cells left); *f*, nerve-fibre layer. The ganglion cells have almost entirely disappeared, a few nuclei only being present. There is marked retinal œdema, especially in layer of nerve-fibres.

Of the remaining ten, in five it was not possible to assert whether the occluding mass was an embolus or a thrombus, thus leaving but five cases in which an unmistakable embolus was found. In two of these five cases it was found only in cross section of the nerves, but not in a longitudinal section of the vessel. In regard to the difficulty in securing a section passing along the axis of the vessel the writer was fortunate enough to have everything work successfully; the knife was sharp, the embedding mass was of the proper consistence,—so that beginning at one side of the nerve he secured about seventy-five complete sections before he reached the opposite side without losing or mutilating a single one; and out of all these but two passed along the axis of the vessel, showing the embolus in position.

For many reasons the writer believes that the present case is exceptionally interesting and instructive. In the first place the embolus was found, this being the first case in America in which this has been done. Again, this case is one of the four that have been studied in eyes that have been enucleated during life, and but one other case was enucleated so early after the occurrence of the embolism; the early cases being valuable as showing the early destruction of the ganglion-cells and nerve-fibres of the retina, as well as the degeneration of the optic nerve.

A New Operation for Congenital Ptosis, with Report of Two Cases. (*New York Medical Journal*, December 21, 1895.)

T. C. Evans, of Louisville, Kentucky, reports two instances of the hereditary type of the affection in brothers whose father and grandfather were afflicted in the same manner. To use his own words he says,—

"I found both patients bad subjects for plastic surgery, on account of an apparent predisposition to eczema. In spite of every precaution the skin around the edges of the wounds would become eczematous, and later the stitches would suppurate, which, of course, loosened the flap and destroyed the effect of the operation and left some cicatrices which are still

plainly apparent. While some improvement followed the operation of Panas's method, as must necessarily be the case in any procedure that would produce vertical cicatrices of the superior lid, the result was so far from satisfactory that I decided to operate a second time by a new method, or, more correctly speaking, by a radical modification of Mules's method. With the patient anæsthetized, I made an incision three-eighths of an inch long in the free margin of the lid and about a sixteenth of an inch in depth, the site of the incision being midway between the outer and inner canthus. I then made a second incision three-fourths of an inch in length above the brow, extending through the integument and occipito-frontalis muscle (the most prominent part of the occipito-frontalis having been determined and marked prior to the anæsthesia). Then, taking a flat needle having a long, flexible shank with the eye very near the point (Fig. 1), carrying about six inches of No.

Fig. 1.

30 silver wire, I passed it into the lid at the inner extremity of the marginal incision, passing upward between the orbicularis muscle and the tarsus, under the brow, and coming out at the inner extremity of the incision above the brow. The needle was withdrawn, leaving the wire in position; the other end of the wire was passed through the eye of the needle and carried into the outer extremity of the marginal incision and brought out at the outer extremity of the superior incision, and the needle was withdrawn as in the first instance. The loop of wire was drawn into the marginal incision, and the wound was closed with four or five firm sutures. The ends of the wire were then passed through a perforated (No. 1) shot and traction made until the desired elevation of the lid was secured. The shot was then pressed with pliers and the excess of wire clipped off, tearing a quarter of an inch on each side of the shot. The incision was closed with silk sutures. Afterwards the superior incisions were dressed with iodoform gauze; the marginal incisions were left without dressing. Both eyes of each patient were operated upon under one anæsthesia. The sutures were removed from both superior and marginal incisions forty-eight hours after operation. The results in the four operations have all been successful far beyond my expectations, as can be seen from the photographs taken before and after the operation.

"The points of superiority of the operation as devised are that the incisions make it possible to bury the wire from the start without waiting for it to 'sink below the skin' of its own accord. With the incisions the recovery from the operation is practically complete in forty-eight hours. The introduction of the needle at the lid margin instead of above the brow removes the possible danger of passing through the lid and puncturing the sclera, and secures a better position for the suture. With the perforated

FIG. 2.

Case I. before operation.

FIG. 3.

Case I. after operation.

FIG. 4.

Case II. before operation.

FIG. 5.

Case II. after operation.

shot the degree of elevation of the lid is quickly, easily, and accurately controlled without endangering the integrity of the wire by twisting. Then, if at any time after the operation it is desirable to modify its effects, it is only necessary to cut down upon the shot, which can readily be felt beneath the skin, and diminish or increase the effect by altering the length of the wire loop.

"As to the permanency of the result, the only thing that could unfavorably influence it would be the migration of the suture. The size and shape of this, together with the embedding of the shot, make this so remote a probability as to practically eliminate it from consideration."

OBSTETRICS AND GYNÆCOLOGY.

IN CHARGE OF RICHARD C. NORRIS, M.D.,

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AND

LAWRENCE S. SMITH, A.B., M.D.,

Instructor in Clinical Gynæcology in the University of Pennsylvania.

Concerning Gonorrhœal Metritis. (*Centralblatt für Gynäkologie*, No. 50, 1895.) By Max Madlener, M.D., of Munich.

In a uterus and appendages, removed from a patient ten weeks after gonorrhœal infection and seven weeks after labor, Dr. Madlener and Dr. Beltinger were able to demonstrate the gonococci in the cervical and uterine mucous membrane, in the muscular wall of the uterus, and in the wall of the pyosalpinx. The diplococci were for the most part intracellular, though in many places they lay between the cells. After a minute description of the microscopical appearance of the specimens the author gives the following *résumé:* The gonococcus is capable of penetrating from the endometrium the muscular wall, and setting up inflammation there; this process may progress to suppuration, especially in the puerperium, but generally it is less violent; the gonococcus soon disappears from the muscular tissue, in rare instances passes through it to infect the peritoneal covering without infecting the tube.

Oöphorectomy per Vaginam. (*Centralblatt für Gynäkologie*, No. 12, 1896.) By E. Bumm, M.D., of Basel.

Bumm reports five ovarian cysts, two of them dermoids, operated upon through the vagina. He thinks the operation a simple one, even when the tumors are behind the uterus, if they are movable, and low down in Douglas's sac. Firm adhesions hinder the shelling out of the cyst and render previous hysterectomy necessary. He is particularly impressed with the

ease with which tumors may be reached through the anterior vaginal vault, and the satisfactory way in which the uterus and adnexa may be examined. The distressing symptoms of the first days after operation and the danger of subsequent hernia are much less than after an abdominal oöphorectomy.

A Contribution to the Knowledge of Septic Peritonitis. (*Centralblatt für Gynäkologie*, No. 12, 1896.) By Albert Sippel, M.D., of Frankfort.

Sippel reports an abdominal myomotomy that terminated fatally on the fifth day after operation, with symptoms of profound septic infection. At the autopsy the point of infection was found to be the uterine tissue from which the tumor had been enucleated and which had been sewed together with silk sutures. Bacteriological examination of pieces of this tissue and of the pus in the abdominal cavity showed pure cultures of staphylococcus albus. There was an acute yellow hepatitis, but cultures from the liver proved negative, as had also those made from the blood ten hours ante mortem. The wound in the uterus had been infected during the operation; the bacteria, finding a favorable medium in the partially devitalized uterine tissue, produced their peculiar toxine and worked through into the peritoneal cavity. This toxine depressed the power of resistance of the peritoneum, and, at the same time, irritated it to a free serous exudate. Experimentally the peritoneum is able to destroy considerable numbers of staphylococci unless its power of resistance is lowered by the introduction of the toxine,—it is the toxine and not the organisms themselves whose absorption causes the toxic symptoms. For the production of this toxine, a favorable culture medium is required, and one of the best is this peritoneal exudate. By affording free drainage either through the abdominal wall or through the vagina, as soon as symptoms of peritonitis appear, both the toxines already formed and the serous exudate may be carried off and absorption prevented. Any blood coagula or necrotic ligated uterine or ligamental stumps that may act as a propagating medium should be removed as completely as possible. This is especially applicable to the uterus in cases of septic puerperal endometritis, in which the large subinvoluted organ is especially favorable to progressive infection. The author refers to a puerperal case reported by him two years ago cured by a supravaginal hysterectomy.

New Methods of Vaginal Antefixation of the Uterus. (*Centralblatt für Gynäkologie*, No. 10, 1896.) By E. Wertheim, M.D.

Noting that both vaginal and ventro-fixations of the uterus are apt to interfere with the normal course of subsequent pregnancy, when the fixation sutures are placed in the uterine tissue itself, Wertheim advocates the anchoring of the round ligaments and not of the fundus uteri to the anterior vaginal wall. He exposes the plica vesico-uterina through the anterior vaginal wall, and opens it by a broad transverse incision. He anteverts the uterus, exposing the round ligaments, and throws a ligature around first one and then the other. If the fixation is to be purely peritoneal, the liga-

ments are included in the sutures closing the angles of the opening in the plica, and the two ligatures mentioned first are withdrawn; but if the fixation is to be a firmer one, the original ligatures are passed through the vaginal wall on either side and the vaginal wound is then closed. Already four cases have been operated upon successfully by this method in Professor Schanta's clinic in Vienna, but too short a time has elapsed to determine whether satisfactory results will be permanent.

Concerning Prolapse and Pelvic Fixation of the Ovaries. (*Centralblatt für Gynäkologie*, No. 9, 1896.) By M. Sänger, M.D., of Leipzig.

The author describes the ligaments of the ovary, its abnormalities in position, and the causes and symptoms of such abnormalities. The treatment he divides into non-operative and operative. In regard to the latter he finds that ventro-fixation of the uterus is not always effectual in holding the prolapsed ovaries up in their normal position, and proposes what he terms pelvic fixation of the ovaries as a supplemental operation. He restores them to their normal position by fastening them to the lateral walls of the pelvis by two fine sutures, passed through the mesosalpinx near the ampulla of the tube, and through the parietal pelvic peritoneum close to the ligamentum ovarico-pelvicum. In the two cases reported, the results were most satisfactory, the ovaries retaining the high position in which they had been fastened.

Fibroma of the Vaginal Wall. (*Journal of the American Medical Association*, February, 1896.) By John B. Murphy, A.M., M.D.

In the year 1882 there appeared from Keinwächter an article on "Vaginal Myoma and Fibroma,"[1] in which he collected fifty-three cases. This is the largest and, in fact, the only collection that I have been able to find. Breisky,[2] in the year 1886, added five to this number, which included the cases of Von Hermann, two from Gaye, one from Casewell, and one of his own. In addition to these, I find one from Hasenbalg[3] and one from Archibald Donald.[4] The one reported by E. Hasenbalg was polypoid in shape. Of the total number, twenty-nine were in the anterior, twelve in the posterior, five in the side, others not given. The tumor may reach a considerable size. Oliver and Jacob's cases weighed a kilogramme. In two old cases reported by Baudier and Gremler the tumor weighed ten pounds. They are more frequently sessile than pedunculated. The development of the tumor is extremely slow. It may be observed at all ages. Martin reports a case in a child at birth. Tractzl found one in a child fifteen months old. It produced obstruction of the urethra and rectum. They

[1] Zeitschrift für Heilkunde, vol. iii. p. 335, Prague.
[2] Die Krankheiten der Vagina, Deutsche Chirurgie, Lief 60, p. 163.
[3] Zeit. für Geb. und Gyn., vol. xxiii., Part I., p. 52.
[4] Med. Chron., January, 1889, p. 103.

are most commonly detected at middle age, and are often found in old people, where they have existed for many years.

The symptoms produced by them are merely mechanical,—*i.e.*, pressure upon the bladder, urethra, rectum, and surrounding tissues. One case reported was accompanied by uterine hemorrhage. The diagnosis is not difficult to make, the greatest care being necessary to differentiate it from cysts in the vaginal wall close to the urethra and fibroma of the cervix uteri. It presents a smooth, hard surface, and can be distinctly separated from the uterus in the majority of cases. When located in the anterior vaginal wall, it usually begins at the urethra, close to the sphincter, and spreads laterally between the mucous membrane, as in the following case.

History.—S. B., admitted to the Mercy Hospital October 17, 1895. Family history negative. About four years ago patient noticed that a tumor projected from her vagina. It grew with moderate rapidity, and when about the size of an apple it ulcerated on the surface and gave a very offensive discharge. Up to this time the tumor had not caused any unpleasant symptoms, with the exception of a heavy, dragging sensation in the pelvis. She was operated on at that time (two years ago) and the protruding portion removed. About six months ago, she discovered that a prominence still remained in the anterior wall of the vagina. There was no pain nor discomfort. It has gradually increased in size. There were no urinary symptoms.

Examination.—The smallest portion of the tumor is apparently attached to the wall of the urethra in the median line. It extends from that point to the left, out to the margin of the pelvis. It can be distinctly separated from the uterus, to which it is not attached. The largest portion presses upon the left side of the pelvis, in front. Rectal examination shows that the tumor is about an inch from the cervix uteri, and hugs the left pelvic wall closely.

Diagnosis.—Fibroma of vaginal wall.

Operation.—An incision was made in the anterior vaginal wall, beginning at the urethra, and extending to the left an inch and a half. The surface of the tumor was exposed, and it was readily enucleated with the finger, from the submucous vaginal tissue. Cavity packed with iodoform gauze. Uninterrupted convalescence. The measurements of the tumor are nine and a half centimetres long, and five centimetres in diameter; the thick end being four inches and the smallest two and a half inches. It weighs fifty-seven grammes. The microscopic examination shows it to be a fibroma, consisting entirely of fibrous tissue, and nowhere was muscle to be seen.

NEUROLOGY.

IN CHARGE OF LANDON CARTER GRAY, M.D., New York City,
GUY HINSDALE, M.D., Philadelphia,
WILLIAM BROADDUS PRITCHARD, M.D., New York City, AND
WM. G. SPILLER, M.D., Philadelphia.

A Case of Motor Polyneuritis of Slow Development, with Consecutive Lesions in the Spinal Cord. (*Comptes-Rendus hebdomadaires des séances de la Société de Biologie.*) By Professor Dejerine and Dr. Sottas.

The patient acknowledged previous syphilitic infection and excessive drinking. At the age of twenty-nine he became weak in all four extremities, as well as in the muscles of the neck, jaw, and tongue, and cramps were felt in the limbs. These symptoms progressed with periods of improvement. The weakness in the head later was limited to the muscles of the tongue. When examined two years after the commencement of the disease the paresis was more marked on the right side, the gait was that known as "stepper gait," the arms hung at the side, and the head was thrown back. The atrophied muscles reacted to the faradic current, and there was no reaction of degeneration. The tendon reflexes were very feeble, and sensation was perfect in all its forms.

Five years later the lower limbs were still weak and atrophied, the patella reflex was absent, the atrophy had disappeared, and power had returned in the arms, although some muscles still showed fibrillary contractions, the tongue was wasted and presented similar twitchings.

Death was due to tuberculosis.

At the autopsy the muscles of the extremities were found atrophied, with fatty degeneration in the lower limbs. The anterior spinal roots and nerves supplying the lower limbs were very small. The more peripheral portions of the nerves and their intramuscular ramifications showed degeneration. The intramuscular nerve-fibres of the lower limbs alone were diseased, and were less so than the anterior roots of the lumbar swelling. The anterior roots of the cervical region were less involved than those of the lumbar, while the posterior roots were everywhere normal. The cells of the anterior horns were altered throughout the cord, but not in proportion to the destruction of the motor roots.

Notwithstanding the cellular alteration, the mode of development of the disease, the nature of the morbid changes, the periods of improvement, the disappearance of atrophy and paralysis, existing at first in the head and neck and arms, the amelioration of symptoms in the lower limbs showed that the cells were not primarily diseased, for these are not restored when once destroyed. This view is made more probable by the greater alteration in the motor roots and nerves, as compared with that in the cells, shown especially in the cervical region, where the latter were almost intact.

The Primary Combined Systemic Disease of the Spinal Cord. (*Deutsche Zeitschrift für Nervenheilkunde*, 1895, p. 171.) By Max Rothmann, M.D.

Dr. Rothmann devotes many pages to a careful discussion of this disease. He expresses his views as follows:

1. The primary combined systemic disease of the cord must be considered as well defined from other forms.

2. It is clinically shown by simultaneous, or nearly simultaneous, symptoms, which indicate disease of the posterior and lateral columns. The patellar reflex is at first exaggerated, and either remains so until death or disappears in the last stages. The pupillary reflex is usually preserved. The process involves almost always the lower extremities first, and ascends.

3. The disease has a rapid course, and does not last over three years.

4. In the posterior columns the posterior root zones are not at first diseased, and the posterior roots usually escape. The crossed pyramidal and usually the direct pyramidal and direct cerebellar tracts are involved, with slight changes in the rest of the antero-lateral columns.

5. In many cases the gray substance of the cord is altered.

6. The whole process can be best explained by a primary affection of the gray substance. Pernicious anæmia and concussion of the spinal cord are important causes, whereas syphilis cannot be so considered.

7. The cases of tabes of long duration, with secondary involvement of the lateral columns in the last stages, and those of spastic spinal paralysis, due to degeneration of the crossed pyramidal tracts, with secondary affection of the columns of Goll, must be distinguished from the primary combined systemic disease.

Dr. Rothmann records three cases,—in one of which pernicious anæmia had been present,—the duration of which did not extend over half a year. The first symptoms were weakness and paræsthesia in the lower extremities. The patellar reflex disappeared in two cases, and became feeble in the third; probably it had at first been exaggerated in all three. Paralysis of the diaphragm was the cause of death in two of the patients. The disturbance of sensation was at first less marked than that of motion, but in two cases the loss became absolute. Vesical and rectal symptoms were present. The tendency of the disease to ascend from the legs to the trunk and arms was clearly shown.

The tracts above mentioned were found diseased. This type differs from Friedreich's form, chiefly in absence of heredity, the age of development, the acute course, and in absence of marked degeneration in the posterior roots.

A Case of Landry's Paralysis, with Recovery. (*Deutsche medicinische Wochenschrift*, November 21, 1895.) By Dr. Behrend.

A man of thirty-seven years, after alcoholic excess and exposure to cold,

had disturbance of sensation in the mouth, neck and chin; two days later, paralysis of the legs developed, followed in a short time by loss of power in the trunk and arms, and by difficulty in swallowing and speaking. It was impossible for him to raise himself or to maintain a sitting posture. The pupils reacted slowly, and the sixth nerves were paralyzed. Objective sensation was diminished over the chin, but was normal over the trunk and limbs, perhaps a little delayed in the legs. The face appeared somewhat rigid, and the naso-labial folds were not distinct. Whistling was impossible. Regurgitation of fluid through the nose occurred in attempts to drink, and a portion entered the larynx. No tenderness to pressure over the spinal column, or over nerve-trunks, was present. Slight motion was possible in the arms and knees. The patella reflexes were absent. The electrical reaction of the paralyzed muscles was good at all times. Two attacks of dyspnœa, with anxiety, occurred. Two months after the beginning of the disease the patient was able to walk with a cane, although his gait was unsteady, and the patella reflexes still failed; otherwise, restitution was complete.

Dr. Behrend considers the case as belonging to the bulbar type (Leyden) of Landry's paralysis, as distinguished from the neuritic form. The nerves could not have been involved, as the electrical irritability was preserved, nor could a true organic lesion have existed which had ended in recovery.

He considers the cause a functional disturbance due to alcoholic intoxication.

A Case of Isolated Total Right-Sided Trigeminus Paralysis. (*Wiener klinische Wochenschrift*, No. 10, 1896.) Presented by Dr. Hirsch in the Verein für Psych. u. Neurol. in Vienna.

Neuralgic pains and disturbances of sensation developed in a patient in the area innervated by the right trigeminus with paralysis of the muscles of mastication. The cause was unknown. The right-sided corneal reflex was slow, the scleral reflex on this side failed. A mild type of conjunctivitis and a lessened lachrymal reflex to irritation were noted on the same side. In opening the mouth, the jaw went to the right with a slight subluxation. The sense of taste was disturbed on the right side. The relaxation of the tympanic membrane was due to disturbance in the function of the tensor tympani. The tensor veli palati was paralyzed on the side of the lesion. Reaction of degeneration was noted in the right temporal and masseter muscles.

After a time the symptoms improved, although power in the muscles of mastication on the right side remained feeble.

Salicylate of soda and phenacetin were used in treatment. The peripheral nature of the lesion, the progressive amelioration probably from antirheumatic drugs, the absence of any known cause led to the diagnosis of a rheumatic process. The trigeminus is so well protected that it seldom becomes diseased in this way.

Glioma of the Cerebellum.—Dr. E. D. Fisher presented at the last meeting of the American Neurological Association a tumor of the cerebellum. The interesting feature of the case was the absence of any symptoms that could be directly referred to the cerebellum. There had been no incoördination or any staggering in the gait. The pain had been situated principally over the right orbit. The only well-defined cranial lesion had been that of the eighth nerve on the right side, with absolute deafness. There had possibly been a slight involvement of the seventh nerve on the right side, and the patient had said she had complete loss of smell. The general symptoms of a cerebral tumor—namely, headache, convulsions, and optic neuritis—had been present. A lesion at the base of the brain had been suggested by the cranial-nerve lesion, with involvement of the cerebellum; the absence, however, of cerebellar symptoms, and the localization of the pain so definitely over the right orbit, had led to an exploratory operation in that situation. The tumor had not been found at the time, but there had been complete relief from the pain and the convulsions until the time of death, eleven weeks later, which had been caused by a septic basilar meningitis. The autopsy had revealed a glioma involving the right cerebellar hemisphere. The operation had been by the bone-flap method.

Disseminated Sclerosis. (*Berliner klinische Wochenschrift*, No. 9, March 2, 1896.) By Professor H. Oppenheim.

After referring to infectious diseases, among which influenza and malaria may be included, Professor Oppenheim speaks of intoxication by chemical and metallic poisons, lead, phosphorus, etc., in the etiology of disseminated sclerosis. He mentions that Krafft-Ebing attributes many cases to the effect of cold.

While it is true that the fully developed disease is rare in childhood, and that only a few doubtful autopsies of such cases are recorded, it is not true that the disease does not begin at this period. It is a disease which often lasts twenty to thirty years, and may have periods of exacerbation separated from one another by long intervals. Oppenheim has traced the initial phenomena, such as disturbances of sight or temporary paralysis, back to early life.

In eleven out of twenty-eight cases he has obtained the history of occupation in metallic poisons. Trauma also plays a part in the etiology, and in some cases there may be a congenital predisposition, as demonstrated by the development of certain symptoms in very early childhood.

The autopsy in one of his cases showed an inflammatory process which had begun about the vessels of the white and gray matter, and had caused ascending and descending degeneration. A diffuse inflammatory process may thus produce the symptoms of disseminated sclerosis.

In another case the tremor and spastic paresis were limited for many years to one-half of the body and the intellect was very feeble. The autopsy showed some slight changes in the cord and a patch of sclerosis, which

occupied almost the entire corpus callosum. (Hemiparesis or hemiplegia, with some weakness on the other side of the body, has been noticed in tumors of the corpus callosum.)

A third case could be traced back beyond a doubt to the fourteenth year. A disturbance of sight was the only cerebral symptom for twenty years. At one period thermo-anæsthesia in the leg was the only modification of sensation.

At an early period the diagnosis of disseminated sclerosis may be easy, later it may be impossible, as the symptoms frequently disappear,—a peculiar feature of this malady. Intention tumor is not a descriptive term, for the trembling is not only in intentional, but also in associated, reflex, and automatic movements.

Romberg's sign, as well as unilateral enlargement or diminution of the palpebral fissure and of the pupil, may be found in multiple sclerosis.

The disease may begin as acute encephalitis pontis. Temporary dementia may last for hours or months, and disappear only to reappear later. Such exacerbations may be due to over-exertion, taking cold, trauma, and especially the puerperium.

Subconscious Fixed Idea.—The importance of the subconscious fixed idea in the production of morbid phenomena is very lucidly illustrated in a paper by Pierre Janet, in the June number of *Revue de l'Hypnotisme*, an abstract of which has been contributed by Dr. William Romaine Newbold to a recent number of the *American Naturalist*.

Janet first gives a typical case of conscious fixed idea. A woman, aged thirty-eight years, of neurotic ancestry, falls in love at first sight with the physician called to attend her child, and for some years remains under the control of this fixed idea. Here we have (1) marks of mental weakness; (2) an irrational passion attached to one idea; (3) its natural consequences in words, acts, etc. Four other cases are then detailed, precisely analogous, save in the absence of the second factor, there being no conscious fixed idea. An hysteric woman, aged twenty-one, has repeated attacks of vertigo and groundless terror. Another sustained, at twenty-nine, three distinct shocks: her father lost his money, a near friend died of phthisis in her presence, and she saw a man crushed to death. For four years afterwards she fell into an apparently dreamless sleep upon the least shock. A woman of neurotic family, a sister insane, father and grandfather drunkards, has monthly attacks of mental and physical distress which end in an uncontrollable desire to drink. After a spree of several days' duration she recovers consciousness, but has no memory of the attack. While in her normal state she is a total abstainer and abhors liquor. In all these cases there is no conscious fixed idea, but when the patients are hypnotized, it apparently comes to light.

Case I., in hypnosis, tells of a horrible dream she once had, in which she jumped from a bridge; the recurrence of this dream produces the

vertigo. When a child she was frightened by a snake, and she claims that the terrors are due to seeing snakes about her. Case II. is told, while hypnotized, that when she falls asleep she is to dream aloud; her dreams are invariably repetitions of her friend's death-scene. Case IV., in hypnosis, confesses to an insane desire to drink, of her normal self is wholly unconscious, and Janet, in tracing the history of the case, ascribes this to the fact that in her earlier convulsive attacks, the suggestion to drink was constantly given her by the presence of her drunken father. Case III., hypnotized, has no memory of dreams which could have caused her annoying trouble, but her hand, in automatic writing, tells of nightmares utterly unknown to her, during which micturition takes place. From a study of these cases Janet draws the inference that in all of them a fixed idea exists subconsciously, which produces in the higher consciousness effects analogous to those produced in the first case by a conscious fixed idea.

"What is the Value of Operative Treatment in Epilepsy" is the title of a paper by E. Gaillord Mason, of New York, which presents some interesting data, with result and conclusions of decisive value and importance. The paper is based upon an analytical study of seventy cases, collected from contemporaneous literature,—only cases involving operations upon the skull or brain are included, the writer not touching the subject of operative measures for the relief of various sources of reflex epilepsy. Of the seventy cases, three are recorded as positively cured and the claim admitted; six are stated to have been improved, fourteen were not benefited at all, three died under the operation, and one case ended fatally from malignant disease. Of the remaining forty-three cases, in two the fits ceased after the operation, but, as bromides had been continued, the cause of the cessation remained in doubt; in thirty-eight cases the interval of time subsequent to the operation is said to have been too short to justify any positive conclusions as to the results, and in three cases the interval of time is not mentioned at all, so that no conclusion whatever could be reached with regard to them. In all, or most, of these undecided cases (forty-three in number), however, the reporters claimed either partial or decided benefit, and in some instances cure. While I agree with the author that such claims are not permissible until time shall have established their truth, I am none the less convinced that it is a legitimate inference that a proportion of these forty-three cases, equal to the proportion in the series of twenty-seven, will eventually show a cure. This would give eight cases out of seventy, or perhaps nine, since none of these forty-three have died, while four of the other twenty-seven proved fatal. This would give about fifteen per cent. of cures, with a mortality of five and a half per cent., an exceedingly favorable showing when compared with the ratio of recoveries to cases treated by any other method. Not a few neurologists are profoundly sceptical as to any *cures* of epilepsy from drug treatment. The statistics of operation would present an aspect even more favorable if proper intelligence and discrimination were exercised

in the selection of cases for operation. Several of these seventy, as the author states, should never have been touched by the surgeon, and he especially emphasizes this necessity for proper selection, in certain broad principles to be observed, outlined as follows:

(1) Always consider an epileptic fit as a symptom of some underlying condition. (2) Inquire particularly and very carefully about the first convulsion,—What was its apparent exciting cause; what was its character, general, or affecting only certain portions of the body, and what portion of the body was affected at the beginning of the fit? (3) If there was an aura, investigate it carefully, as it will not infrequently give a clue as to the seat of the lesion. (4) If there had been a trauma or a suspicion of trauma, shave the head and look carefully for a scar or a depression. If there is evidence of a trauma in a position corresponding to the initial symptoms of the fit, an operation is usually justifiable. (5) If you cannot get a clear history of the case, give a placebo, and place the patient under competent surveillance until you can satisfy yourself as to the character of the fits. (6) Do not operate on a porencephalic child and expect to cure the epilepsy. Do not, as a rule, operate on a case of post-hemiplegic epilepsy in a child and expect to cure. (7) Do not operate on an old, idiotic epileptic, a victim of idiopathic epilepsy, with general convulsions of years' standing.

The author's final conclusions are as follows:

"(*a*) A certain small proportion of cases will be cured.

"(*b*) A certain larger proportion will be improved.

"(*c*) An even larger proportion will not be improved at all.

"(*d*) An operation upon almost any case will produce a temporary cessation of fits."

It will be noted that the author's conclusions are based practically upon the results in the twenty-seven cases only. An analytical study of the whole series, as already outlined, would justify a decidedly more optimistic view of the value of operative treatment for epilepsy.

Insanity treated with Thyroid Extract. (*Fourth Annual Report of the Sheppard Asylum*, Baltimore, 1896.) By E. N. Brush, M.D.

The author states that within the last year the thyroid gland has been used at this institution in a few cases which were deemed suitable. In several instances improvement was rapid and marked. One patient is now at her home, of whom it was thought for months that nothing further could be done. In her case the change from noise, turbulence, and destructiveness which occurred almost immediately following the administration of the gland in a desiccated form was astonishing, and the physical change which soon followed was similarly remarkable. In the three years which have elapsed since this method of treatment was introduced many disappointing failures have resulted, and many more will undoubtedly follow. We know as yet but little of just what character of cases, aside from those

associated with myxœdema, are best suited to this form of treatment. Chronic mania, dementia, and melancholia have all yielded in some instances to its influence. We are, moreover, ignorant of its exact physiological action. Carelessly given it is a dangerous drug. It has a powerful influence upon the heart and upon the whole nervous system. It produces rapid tissue-change in the body with loss of weight, and there is a resulting sense of bodily weakness and depression.

PATHOLOGY.

IN CHARGE OF ALLEN J. SMITH, A.M., M.D.,
Professor of Pathology in the Medical Department of the University of Texas, Galveston, Texas,
AND
HENRY W. CATTELL, A.M., M.D.,
Demonstrator of Morbid Anatomy in the University of Pennsylvania; Prosector to the American Anthropometric Society; and Pathologist to the Presbyterian Hospital, the Institution for Feeble-Minded Children at Elwyn, etc.

Animal Life with Absence of Bacteria in the Alimentary Canal. (*Hoppe-Seyler's Zeitschrift für physiologische Chemie*, November 26, 1895.) By George H. F. Nuttall and H. Thierfelder.

A unique experiment has been performed by these writers for the purpose of ascertaining whether young animals born by Cæsarean section in a sterile room and treated with sterile air and food can maintain life.

The hen's egg was naturally suggested as offering many advantages for this research, but as a great percentage of eggs are infected, the guinea-pig was chosen, the young having great self-dependence and presenting no special difficulties for this research.

An apparatus was arranged which consisted of a bell-jar placed over a cylindrical glass vessel containing four centimetres of water and a layer of two centimetres of oil. Between the two vessels a wire gauze was stretched on which to place the animal. The apparatus was made air-tight with rubber bands. On one side of the bell-jar an opening was closed in with a rubber glove, into which the hand could be inserted when the animal was held while feeding; and on the other side an opening, also closed in with rubber, admitted the nipple of the feeding-bottle. The glass vessel was placed in a copper tray filled with water, which served as a thermostat, and by a gas-burner beneath kept the bell-jar at a temperature of 24° to 25° C.

Germ-free air was supplied by passing air through a cotton filter and a spiral coil of lead to an aspirator water-pump, from this to tubes filled with chloride of calcium, then through a cotton filter, a copper tube, a platinum spiral raised to red heat by a Bunsen burner, another copper tube, again through a cotton filter, into a tube which entered the bell-jar. The

air in passing out was conducted through a cotton filter and a flask of mercury to a gas-meter.

The operation was performed in a sterilized room, the apparatus being sterilized the day before the operation, and left in the sterilizer until the moment of its use.

Cæsarean section was performed whenever the secretion of milk indicated the approach of spontaneous birth. The animal was prepared by shaving the abdomen and thoroughly sterilizing the skin. It was then chloroformed, the uterus was opened, and the young quickly removed and placed in the apparatus, in which ventilation had already been started.

The young animal was fed after twelve hours with sterilized cow's milk, and from that time it was fed regularly every hour, day and night. The first feeding was difficult, but after the third day the rubber glove was seldom used. The fæces were of normal consistence and of a brownish or dark-greenish color.

The animal remained perfectly normal and healthy for eight days, when it was killed, and the fæces examined by microscopical and cultural methods for micro-organisms. The contents of the intestine were found to be perfectly sterile.

The writers conclude from these investigations that the presence of bacteria in the alimentary canal is not necessary for the maintenance of life in the guinea-pig, and probably not for other animals and man if the nourishment is of an animal nature. With a vegetable or mixed diet further investigation must decide the question. A. W. P.

Changes in the Nerves in Spontaneous Sphacelus. (*Meditzinskoje Obozrenije*, No. 16, 1895.) By W. W. Muravieff, M.D.

The very scanty knowledge on this subject induced the author to undertake a series of examinations, using the crural nerves for this purpose. After hardening them in chromic acid and alcohol he cut diametric sections and stained them with carmine, picro-carmine, and nigrosine, according to the methods of Van Giesen and Pal. The typical picture of all the preparations showed the following peculiarities: connective tissue of the nerve was much thickened and was surrounded by large rings, the roundish nerve bundles being pressed and wrinkled; in the external part of this membrane, arteries a little larger, with greatly-thickened walls (at the expense of the intima), were seen, as well as irregular lumina in the shape of fissures; some of the vessels were entirely obliterated, with signs of general sclerosis; small arteries were seen in great quantities, but in an inflammatory state, as were also the veins, though in a less degree. The thinness of the nerve-fibres was noticeable, as well as the loss of myeline, and in some places the disappearance of the axis-cylinder. Spontaneous sphacelus of the extremities may, according to the author, be summed up as (1) an inflammation of the arteries, especially of their intima (endarteritis), and (2) sclerosis of the nerves, in which the affection of the arteries may be regarded as a primary

process, so accepted by the majority of writers who have investigated this subject.—*Universal Medical Journal*, January, 1896. J. M. S.

Sudden Death from Occlusion of the Coronary Arteries. (*Medical Press and Circular*, December 25, 1895.) By Herr Oestreich, M.D.

At a meeting of the Verein für Innere Medicin, the author related a case of this kind in an officer, aged thirty-two, who had always been healthy and who died suddenly on his wedding night. In the ascending aorta several very small atheromatous ulcerations were found upon post-mortem examination. Upon one, lying near and just above the point where the right coronary artery was given off, was a pediculated thrombus the size of a cherry-stone, which hung down and closed the vessel. The thrombus consisted of an older and a newer portion, the latter apparently quite recent. The left coronary artery contained an embolus one centimetre in length, resembling the older part of the one just mentioned. The heart was otherwise healthy and the other organs were sound.

In the discussion, Herr Leyden said that occlusion of both arteries was very rare, the left one being usually affected. He had only seen the right affected once; in that of an old lady. He had seen four cases in which sudden death followed intercourse, but in all the cases connection had been illicit.—*Universal Medical Journal*, January, 1896. J. M. S.

Cocaine in the Study of Pond-Life. (*Microscopical Journal*, March, 1896.) By H. N. Conser, of Sunbury, Pa.

The writer suggests the use of hydrochlorate of cocaine as a narcotic for studying forms of aquatic life, such as the bryozoans and the encased rotifers.

Several colonies of fresh-water bryozoa are placed in a watch-glass with five cubic centimetres of water, and as soon as the animals have expanded, one or two centigrammes of cocaine are dropped on the edge of the water at two or three distant points. In fifteen minutes the narcotic influence is sufficient, as can be tested by touching the tentacles with a needle. One per cent. chromic acid is now poured in to fill the watch-glass and left to act for half an hour or more, when it is nearly all withdrawn and water substituted. This process is repeated in half an hour and alcohol to form about twenty-five per cent. added to the water; the strength of alcohol is increased by the addition of ninety-five per cent. alcohol until eighty per cent. is reached. By this means the chromic acid is washed out and the hardening accomplished so gradually that no distortions occur. For staining, borax-carmine or alcoholic cochineal is used. The clearing must be gradual, and is best accomplished by adding oil of lavender to the ninety-five per cent. alcohol in which the animals are kept, and after an hour bringing them into oil of lavender, from which, after perfect clearing, they are mounted in balsam.

[It would be well worth trying this method for the staining of flagellate

bacilli, and many of the higher vegetable and animal forms of life with which we are especially concerned in medicine.—H. W. C.]

Anchylostoma Duodenale: Is it Wide-spread in India, Assam, and Ceylon, and is it a Harmless or a Harmful Parasite? (*Indian Medico-Chirurgical Review*, October, 1895.) By Hayman Thornhill, M.D.

The writer gives extracts from the reports of Surgeon-Major Dobson, of Assam, and Dr. McConnel, of Calcutta, for the year 1892, in which they express doubts as to whether a specific disease is produced by the presence of the anchylostoma in the intestine, to which the term anchylostomiasis may be applied. He considers it a matter of importance from a public-health point of view to decide the question and to take measures to limit the spread and to mitigate the effects of this disease. He asks the Indian Medical Congress to express its opinion as follows: The anchylostomum is one of the most harmful and dangerous of human parasites; when present in the intestine in large numbers and for a certain period it produces a specific and dangerous anæmia; in the future it should be known by the name of anchylostomiasis so as to distinguish it from true beriberi, which is characterized by the presence of neurotic symptoms.

The figures and statements in the Assam report show that the parasite is widely distributed through that region. Dr. Dobson gives the results of the examinations of the fæces of hundreds of healthy-looking coolies and other persons, and the finding in them of anchylostoma, and he infers that because these coolies appeared healthy the parasites must be harmless. He has not taken into consideration that small numbers may be present for long periods and large numbers for short periods without causing serious or any symptoms. The effects produced will vary according to the state of health of the host.

This disease in regard to extensive prevalence and destruction of life and labor is second only to malarial fever, which is the terribly destructive and depopulating disease of the sparsely populated, low-lying, unhealthy divisions, while anchylostomiasis takes its place and is almost equally prevalent and destructive in the higher portions of the province, which are comparatively free from malaria.

The only effectual method for checking the wide-spread destruction of life due to this preventable cause is the prevention of the pollution of the ground about dwellings, on estates, and in towns and villages, by the provision and proper cleansing of sufficient and suitable latrine accommodations being rendered obligatory, and by their use being insisted on, the committing of nuisances being made penal.

The Myelocyte of Ehrlich. (*Boston Medical and Surgical Journal*, January 2, 1896.) By Richard C. Cabot, M.D.

The myelocyte or marrow cell is usually described as a very large, round cell, three or four times the size of a red corpuscle or even larger, and con-

taining a round or oval nucleus which usually lies eccentrically. The protoplasm is filled with fine, irregularly-shaped granules, which, when stained by Ehrlich's method, are neutrophilic, and take a reddish-violet tinge, the nucleus staining light blue or greenish-blue.

The study of these cells in leukæmia and other diseases has caused the writer to modify some of the details of this description.

In regard to size, he has found, by measuring cells which correspond otherwise to the description of myeoclytes, that the diameters vary from seven to twenty-three mikrons; and in four cases in which bone-marrow was examined, the same range of variation in the diameter of the otherwise typical leucocytes was found. It seems impossible, therefore, to distinguish myelocytes from other cells by their size alone, for cells of all sizes are found which resemble myelocytes in all other respects.

The myelocytes naturally show the round shape of all non-amœboid leucocytes; but amœboid and non-amœboid cells are alike spherical in most instances in stained specimens, so it is difficult to distinguish sharply between myelocytes and the polynuclear cells by their shape.

The number and shape of the nuclei is no final criterion, for myelocytes may have either one or more nuclei, and polynuclear cells may have only a single oval nucleus.

The staining properties of the nucleus seem to be the most constant factor for differentiation. The nucleus of the polynuclear cells usually stains darker and more unevenly than that of the myelocytes, patches of pigment being seen on a lighter ground. In the myelocyte the purplish or greenish tint is always pale, and nearly always even, while the edges of the nucleus are less sharply defined than in the polynuclear cell. This difference in staining is not, however, invariable, and in doubtful cases the shape of the myelocytic nucleus, being round or oval, is generally to be contrasted with that of the polynuclear cell, which is twisted or broken.

The writer suggests the following definition for the myelocyte: A myelocyte is a spherical, neutrophilic cell, varying in diameter from seven to twenty mikrons or more, and characterized by the presence of one (rarely two) nuclei which stain faintly and evenly with a purplish or greenish-blue color. The nucleus is generally round or oval, and often vacuolated, and is in close relation to the surface of the cell for a comparatively large portion of its extent.

An estimation of the leucocytes found in eleven cases of leukæmia leads the writer to think that the percentage of myelocytes in leukæmia is much larger than that generally given in text-books.

Flagellated Bacteria.—The hair-like appendages, common to all microscopic, motile spores, form the locomotor apparatus by which infusoria, zoöspores, and bacteria are propelled. They vary much in number in different varieties of bacteria and also in the bacilli of the same culture. These filaments are either diffuse—situated around the cell body—or polar,—given

off from the extremities. They are from three to fifty mikrons in length, and present wavy or straight lines, rings, and uncurved and looped filaments.

Because of the great difficulty with which flagella are stained, and the conflicting statements of the few observers who have devoted themselves to this work, our knowledge of the morphology of flagellated cells is somewhat confused. To Löffler we owe the first knowledge of the diagnostic value of staining flagella, and his method, first stated in 1889, modified a year later, is now the one generally used, and from which the best results are obtained.

By this method a protoplasmic capsule, faintly colored, is seen around the intensely-stained bacillus and slightly separated from it. Zettnow, Bütschli, Stoecklin, and others consider the bacillus as a unique morphological element of the micro-organism like that which forms the nucleus of a giant-cell. The chromophilous protoplasm of the nucleus takes up most stains readily, but the body or capsule requires the more energetic action of a mordant stain. The flagella are given off from the capsular protoplasm, but they do not always seem to be a part of it. V. A. Moore says that in a large majority of the bacilli examined by him the flagella appear to radiate from the so-called nucleus of Bütschli. Moore has studied the structure of the flagella-producing substance in the cilia of the zoöspores or swarm spores of certain fungi, and thinks it probable that there is a close resemblance between the flagella of bacteria and those of the swarm spores. He speaks of two views for the disposition of the flagella of swarm spores, which, according to Rothert, are both correct. The latter observed that in the first swarm stage of saprolegnia the flagella are drawn back into the body of the protoplasm; but in the second swarm stage of saprolegnia and of peronosporeæ (downy mildews) they are cast off as soon as the spore is at rest, or they remain permanently attached to the cell.

Stoeklin found, in a variety of the colon bacillus, flagella which looked like rough prolongations of the capsular substance that had not attained their full development. He thinks that the aspect of the bacillus is influenced by the age of the culture. Two bacilli are sometimes found in one capsule, and in such instances the number of flagella are doubled; or flagellated capsules without bacilli are seen.

The following directions for staining flagella are taken from the recent edition of Günther's "Bacteriology":

The culture to be used should be a surface culture on freshly-prepared agar, and its motility proved by the examination of a hanging drop. The cover-glasses should be carefully cleansed with alcohol and passed through a flame.

Put a drop of clean water on a cover-slip, and with the point of a platinum needle distribute the bacilli to be examined. Pass the air-dried cover-slip three times through a gentle flame.

Löffler's mordant, which consists of ten cubic centimetres of a twenty-per-cent. solution of tannin, five cubic centimetres of a cold saturated solu-

tion of ferrous sulphate, and one cubic centimetre of an alcoholic solution of fuchsin, and should be several weeks old, is then filtered upon the cover-slip and allowed to remain from one-half to one minute. Heating is not necessary and is even injurious. Wash the mordant off and dry the cover-slip in the usual manner by blowing.

Then stain with a freshly-prepared watery-alcoholic solution of fuchsin, warm the cover-slip over a flame until steam is given off, let it stand for one minute, then wash carefully, dry quickly, and mount in xylol balsam.

Bunge has modified Löffler's mordant by using three parts of a saturated tannic acid solution and one part of a 1 : 20 solution of liquor ferri sesquichlor. To each ten cubic centimetres of this mixture one cubic centimetre of a watery solution of fuchsin is added, and the stain used after it is quite old.

By this and by Van Ermengeni's silver nitrate method good results may also be obtained.

A. W. P.

On the Verification of Sugar-Testing in the Urine. (*Practitioner*, January, 1896.) By Sir William Roberts, M.D., F.R.S.

The testing for sugar in an ordinary diabetic urine, whether by fermentation or by Fehling's solution, yields indications which are doubtful when the quantity of sugar is very small while the normal ingredients are present in their usual or in excessive proportion. The fermentation test yields no obvious sign when the urine is impregnated with sugar to a less degree than 0.5 per cent., and Fehling's test fails when the proportion of sugar ranges much under 0.1 per cent. Uric acid and creatinine exercise a reducing action upon Fehling's solution, and where these are abundant and sugar is scanty the indications of the test are difficult to interpret. If such a urine is passed through animal charcoal three times in succession, it will be rendered colorless and the uric acid and urates will be completely removed, while sugar passes freely through the charcoal with the liquid portion of the urine. Albumin is also removed largely, but not entirely, when the urine is subjected to this treatment. After such a process the filtrate can be treated with Fehling's solution as follows: A test-tube is charged with Fehling's solution to the depth of about a quarter of an inch, and the filtrate is added to the depth of about two inches, the two fluids are then thoroughly mixed, and heat is applied to the upper half of the column of liquid until the boiling point is reached. If sugar be present a comparison of the two portions of the fluid in the tube will show that the upper portion has lost its blue color and has become yellowish.

On the Spleen in the Infectious Diseases. (*Gazette des Hôpitaux*, January 4 and 5, 1896.) By M. Fernand Bezançon, of Paris.

After an exhaustive study of the anatomy and physiology of the spleen, both in its normal state and in states modified by the influence of the infec-

tious diseases, the author concludes that, in the case of septicæmia, the spleen, on account of its rich net-work of capillaries, arrests in varying proportions a certain number of free bacteria and of leucocytes containing bacteria, depending upon the variety of micro-organism present. A certain proportion of these bacteria are destroyed, either by the endothelial cells or, especially, by the mononuclear leucocytes of the organ. This function of the spleen is inactive in local infections. But the most important is its physiological function of forming a large number of leucocytes, or of transforming young leucocytes into adult forms, which, from the spleen, are diffused through all the organism and are carried to the points invaded by the bacteria. According to the nature of the toxins secreted by the bacteria and according to their chemotactic property, this call on the leucocytes will be more or less active. The efficiency of this function will depend upon whether it is or is not hindered by the necrosis of the newly-formed elements. The spleen, in this *rôle*, is active, both in local and in general affections, and it shares the genesis of leucocytes with the bone-marrow and with the lymph-nodes.

FORENSIC MEDICINE.

IN CHARGE OF LORENZO D. BULETTE,
Of the Philadelphia Bar.

CONSENT OF WIDOW NECESSARY TO AUTHORIZE AN AUTOPSY ON THE BODY OF HER DECEASED HUSBAND.

A SURVIVING wife is entitled to the possession of the body of her deceased husband in the same condition as when death occurred, for the purpose of giving it proper care and burial, and she may sue for damages a physician or other person who, without her consent, unlawfully or wantonly dissects or mutilates the body before burial.[1]

The law was thus laid down by the Appellate Division of the Supreme Court of New York, in an opinion by Mr. Justice Patterson, in which he says, "The question presented in this case seems to be one of first impression in this jurisdiction, and comes before the court on appeal from a judgment overruling a demurrer to the complaint. Stated with precision, the inquiry is whether the defendant is liable civiliter, and to this particular plaintiff, for the unlawful dissection of the remains of her husband,—an act

[1] Foley *vs.* D., 37 N. Y. S. 471 (1896).

not only unlawful, but constituting, on the assumption that the facts alleged are true, a criminal offence."

The complaint sets forth that on May 16, 1894, the plaintiff's husband fell through an elevator shaft in a building in the city of New York, and was taken, in an unconscious condition, to the Bellevue Hospital, where he died three hours after his admission; that the plaintiff was a loving and devoted wife, and was under the duty and obligation, and had the right, of burying her husband; that she applied at the hospital for his body, and begged and implored those who were in charge of it not to allow or permit an autopsy to be performed, and gave notice that she would immediately send an undertaker for the body to remove it to her home, where it would be prepared for burial; that, notwithstanding her request and protestations, the defendant, without her knowledge or consent, procured, assisted, aided, and abetted in performing an autopsy on her husband's body, which autopsy was performed without any authority of law, and was wilfully done, by cutting open and otherwise abusing and maltreating the dead body. The complaint then proceeds to state matter intended to be in aggravation of damages, and ends with a demand for a money judgment.

The defendant's demurrer sets forth two objections to the maintenance of this action:

First, That if any one may bring an action of this kind, it must be the next of kin, and not the widow; *second*, that there is no such thing as property in human remains, and consequently no right of action in any one for their mutilation.

In support of the first objection it was argued that, in the absence of testamentary direction on the part of the deceased, the exclusive right of burial and of designating the place in which human remains shall be interred, is with the next of kin; and cases were cited which, in general terms, seemed to sustain this view. "Those cases," says Mr. Justice Patterson, "are referred to and cited in an opinion of Mr. Justice Landon in the case of Snyder *vs.* Snyder,[1] and in commenting upon them that learned judge says, 'Most of the cases there referred to arise with respect to the right to protect the place where the remains were buried; to prevent a disinterment, or to collect from the executors, or relatives of the deceased, the expenses of the funeral. In the absence of a contention prior to burial, as to the right between relatives to designate the place of burial, the broad doctrine that the right rests exclusively in the next of kin, can hardly be construed as a judicial exclusion of the right of the widow.' In this case it will be observed that the question is directly presented with reference to the duty and right the widow owes and has to and over the body of her dead husband prior to interment,—that is, before the remains have passed beyond the necessity of human care and attention. It is provided by the penal code of this State that the dead body of a human being lying within

[1] 60 How. Pr. 370.

this State must be decently buried within a reasonable time after death. The duty must be performed by somebody. It has been held in this country that the primary duty of burying a deceased wife is upon the husband. And it has been expressly determined that if a husband and wife are living together at the time of the death of the former, the widow's right to the possession of the dead body, for the purpose of preservation and burial, is a right in the widow paramount to that of the next of kin. We think, therefore, as matter of law upon the facts as they are stated in the complaint, and without reference to the allegation of the plaintiff's duty and right, she may maintain this action, if it may be maintained at all. The foregoing observations are made to meet the possible suggestion that the allegation of the complaint respecting the duty and right referred to is merely one of a conclusion of law, and, of course, if it is such, it is not admitted by the demurrer. But construing the words of the complaint with reference to this matter as we think they should be construed, they are equivalent to an allegation that, as a matter of fact, the plaintiff was the person upon whom had devolved the obligation and responsibility of complying with that requirement of the law respecting the interment of human remains, to which reference has been made, and that the demurrer admits she was such person.

"This brings us to the second objection involved,—namely, that concerning the right in any one to maintain an action at all. The ground of this objection as urged by the appellant is that there can be no such action because there can be no such thing as property in human remains. By the common law, *stricti juris*, the proposition as to property may be maintainable. A long line of judicial decisions appear to have established a general doctrine to that effect; but courts of equity have frequently interfered to protect the remains of the dead, and courts of law have also afforded remedies through formal legal actions wherever any element of trespass to property, real or personal, was associated with the molestation of the remains of the dead. In recent times the obdurate common law rule has been very much relaxed, and changed conditions of society and the necessity for enforcing that protection which is due to the dead have induced courts to re-examine the grounds upon which the common law rule reposed, and have led to modifications of its stringency. The old cases in England were decided when matters of burial and care of the dead were within the jurisdiction of the ecclesiastical courts, and they are no longer absolutely controlling. Thus, in the case of Pierce *vs.* the Proprietors, etc.,[1] it is stated by the court, 'That there is no right of property in a dead body, using the word in its ordinary sense, may well be admitted; yet the burial of the dead is a subject which interests the feelings of mankind to a much greater degree than many matters of actual property. There is a duty imposed by the universal feelings of mankind to be discharged by some one towards the

[1] 10 R. I. 227.

dead,—a duty, and we may also say a right, to protect from violation, and a duty on the part of others to abstain from violation; and it may therefore be considered as a sort of *quasi* property, and it would be discreditable in any system of law not to provide a remedy in such a case.' But we are not disposed to put the right of the plaintiff to maintain this action on the ground of a property right in the remains of her husband; nor do we think that the discussion is properly placed when it is rested exclusively upon that proposition. Irrespective of any claim of property, the right which inhered in the plaintiff as the decedent's widow, and in one sense his nearest relative, was a right to the possession of the body for the purpose of burying it,—that is, to perform a duty which the law required some one to perform, and which it was her right, by reason of her relationship to the decedent, to perform. That right of possession is a clear legal right, and to use the language of Mr. Ruggles, in his valuable report, adopted by the court, in the Brick Church case,[1] 'the right to bury a corpse, and to preserve its remains, is a legal right which the courts of law will recognize and protect.' The right is to the possession of the corpse in the same condition it was when death supervened. It is the right to what remains when breath leaves the body, and not merely to such a hacked, hewed, and mutilated corpse as some stranger—an offender against the criminal law—may choose to turn over to an afflicted relative. If this right exists, as we think it clearly does, the invasion or violation of it furnishes a ground for a civil action for damages. It is not a mere idle utterance, but a substantial legal principle, that wherever a real right is violated a real remedy is afforded by law. A right to vote can in no sense be called a pure right of property; it is merely a personal right; yet who would now contend that a person obstructing a voter's right, or preventing his voting, would not be, irrespective of any statutory enactment, liable, even if the candidate of the choice of the person thus obstructed was elected? Although the precise question involved in this case has not been judicially passed upon, so far as we have been able to ascertain, in the courts of this State, yet it has been decided in favor of the maintenance of the action by the Supreme Court of Minnesota in the case of Larson *vs.* Chase.[2] In the well-considered and well-reasoned opinion of the court in that case, it was held that the right to the possession of a dead body for the purposes of preservation and burial is a legal right,—one which the law recognizes and protects,—and that the violation of that right by an unauthorized and unlawful mutilation of the corpse before burial gives right to an action for damages in favor of the surviving wife of the deceased. It is there also held that the rule of damages would allow a recovery for mental suffering and for injury to the feelings occasioned directly by the unlawful mutilation, and that although no actual pecuniary loss or damage was proven. It is not for us,

[1] 4 Bradf. (Surr.) 532.
[2] 50 N. W. Rep. 238.

at this time, to express any opinion with respect to the measure of damages in a case of this kind; but we are satisfied that the action will lie, and will lie in favor of the widow, under the circumstances disclosed by this complaint."

BOOK REVIEWS.

EYESIGHT AND SCHOOL LIFE. By Simeon Snell, F.R.C.S. (Edin.), Ophthalmic Surgeon to the Sheffield General Infirmary and to the School for the Blind; Lecturer on Diseases of the Eye at the Sheffield Medical School; Consulting Ophthalmic Surgeon to the Rotherham Hospital. Author of "The Electromagnet in Ophthalmic Surgery," "Miner's Nystagmus," etc. 8vo, pp. 70. Bristol: John Wright & Co., 1895. Price, 2*s.* 6*d.*

A book of this nature, more especially intended for the layman, should be read most carefully and conscientiously by every medical man to whom such questions are daily put. Stripped of all technicality, concise in statement, and most reasonable in price, its good purpose must necessarily be broadly felt. Standing alone in the English language as a separated and conjoined monograph upon this important topic, and written and arranged by one who has had all the advantages of extended research and actual experience, it cannot fail to exert its good influence upon those who have the decision of such matters as it deals with, in their hands.

Parents, guardians, teachers, school-boards, and, in fact, educators of all sorts, once having thoroughly grasped and appreciated the lessons inculcated in its pages, will thus be rendered more authoritative in the questions of school architecture, window-lighting, the relation of the desk to the pupil, the style of writing, the printing of books, the terms of study, recreation, etc., that at present are so uncertain in any but the newest and most modern school systems; whilst medical men who either pursue the pactice of medicine in a broad, general way, or limit themselves to the special branch dealt with in this volume, will not infrequently find subject-matter that is new and useful, and see much with which to refresh their memories, thus rendering them more fully conversant with the subject at large, and hence better able to decide the higher grades of questions that necessarily must be given to them for judgment. C. A. O.

AN ATLAS OF THE NORMAL AND PATHOLOGICAL NERVOUS SYSTEMS. By Dr. Christfried Jakob. Translated by Joseph Collins, M.D. New York: William Wood & Co., 1896.

This work by Dr. Jakob is a welcome addition to the anatomy of the nervous system. The introduction, from the pen of Professor Strümpell, is sufficient guarantee of the care observed in the preparation of the book. The first half of the volume is devoted to illustrations with brief explanatory notes, the second half comprises the text proper. There are a few plates with movable segments representing different levels of the brain. Most of the illustrations deserve unqualified approval; a few might be improved, for example, those showing ganglion-cells stained by the method of Nissl, in which the axis-cylinders seem to contain chromatophilic elements. Dr. Collins deserves credit for the careful translation, which, however, would not have suffered if he had followed the German less closely. In a few places style has been

sacrificed, as he himself says. Meynert's term Gehirnstamm is well rendered by brain-stem, though cerebral axis could also have been employed. Lateral ground bundle seems to be the usually employed translation for the German term.

The text is clear and contains only the best-known facts; theories are largely avoided, to the extent that in some places the language becomes dogmatic, a fault almost impossible to avoid in a book of this size on such a subject. Tænia semicircularis is a term not ususally applied to the band of fibres passing along the upper and inner edge of the thalamus, and the statement that the lower halves of the thalami unite may be questioned. The use of the words cullulifugal and cullulipetal is to be commended; they should become as familiar in English as they now are in French and German. It is questionable if there exists a neuron anastomosis between protoplasmic prolongations. The description of the sensory tract within the brain corresponds with the views of prominent authorities, but would be disputed by others. The course described for the cochlear nerve within the medulla leaves us in some doubt as to what is meant. It would have been wise if the statement had been made that some prominent neurologists deny the existence of a centre for writing and of fibres in the lateral bundle of the peduncle from the occipital lobe.

No matter how carefully written a work on neurology may be, it must call forth difference of opinion, especially if the whole subject is crowded into a volume of this limited size, and we admire the ability Dr. Jakob has shown to do this so successfully. The book is a useful one for the student and the plates are serviceable.

W. G. S.

The American Year-Book of Medicine and Surgery. Edited by George M. Gould. Philadelphia: W. B. Saunders, 1896. For sale by subscription only.

In criticising such a complex work as this, it is not possible to give each man credit for his success in attaining the standard that he has set for himself, for each is only too likely to hold some peculiar views, and the resulting product will lack that harmony desirable in a single volume. And it is concerning this lack of harmony that we would make our first complaint. The editor has not sufficiently asserted his authority, and there is far too much variety of method. Had he been more emphatic, we are sure that the section upon otology would have been rewritten before insertion. When the physician in charge of the section declares that he intends to omit mention of such articles as do not accord with his own opinions, one suspects that he has never been informed of the purpose of the Year-Book; and when the text is found to be thickly interspersed with his personal views, one realizes that he has failed to appreciate the fact that he is writing a review of current literature, and not a text-book. *En passant*, it is perhaps permissible to notice the bad taste displayed in quoting an article of his own, written fourteen years ago. The intrusion of the personal views of the writer is noticeable also in the section on surgery, although here, as indeed is true of the section upon otology, the comment is often excellent. In the other articles it is always kept within proper bounds and is elucidative rather than critical. Two faults, serious enough, but in such a work unavoidable, are repetition and omission. The editor has control only of the former, and he has minimized it with great success. The only glaring instance is the description of sporadic cretinism in the sections upon pediatrics and neurology.

As for the latter, completeness was neither possible nor desirable, but the proportionate number of references differs so widely in the various articles that we suspect some of the writers to have been diffuse rather than industrious. Thus, the space covered by the section upon surgery exceeds that covered by the section upon medicine, yet the references are barely half as numerous. But the most flagrant case of omission is to be found in the article upon clinical chemistry. Three and one-half pages are devoted to this exceedingly important branch, wherein a few articles are quoted, all from English or American publications, one of these being

itself an abstract; while the vast amount of valuable work done by the Germans and the very considerable work done by the French have been absolutely ignored, not to mention the numerous important American and English papers that have been overlooked. This section may be considered the one serious blemish of the book.

The admirable features are many, the sections upon medicine, pediatrics, rhinology, therapeutics, and pathology are all that could be desired, nor are the other important sections noticeably inferior. The descriptions of the new operations in the section upon surgery are models of clearness and completeness, evidently from the pen of a master in this branch. In the section upon pediatrics the subject of the treatment of diphtheria with antitoxin is amply discussed; and in the section upon pathology all the modern theories of immunity are given. The editor's share is ably performed. The space is, on the whole, very well divided, the index complete and at the same time compact. Certain peculiarities of spelling are noticeable throughout the work, some of which seem to be efforts toward a more rational system of English orthography. *Résumé* should never be printed without the accents; if an English word is desired, *summary* almost fills its place. We should like to know what is meant by the statement that there was a fraction over twenty-nine cases of triplets in the whole number of births in Philadelphia during a certain period. The publishers deserve praise for their enterprise in getting up the book, and for the excellent paper, typography, and the substantial binding with which they have furnished it. The Year-Book is perhaps the most practical and valuable American contribution to annual literature. J. S.

An American Text-Book of Surgery, for Practitioners and Students. Edited by W. W. Keen, M.D., LL.D., and J. William White, M.D., Ph.D. Pp. 1213. Second edition. Carefully revised. Philadelphia: W. B. Saunders, 1895.

A text-book which has sold rapidly, has been adopted, as the preface states, in over sixty medical colleges, etc., and passed to a second edition within three years, would certainly seem to be above criticism. Such success does demonstrate the inherent value of the work and the literary acumen of the associated authors, but, unfortunately, the very success invites criticism, especially as it is asserted that this volume has been "carefully revised."

We note, page 3, "It is well known that syphilis may be acquired through both the semen and the placenta." P. 137, "There are no reliable cases of syphilitic contagion by the spermatic fluid." "Koch's remedy, which is at present attracting so much attention," is a statement veritable three years ago, but not now.

In the chapter on syphilis, under classification of syphilitic eruptions, there is no separate mention of *vesicles*, a very large and important division; and, p. 71, the student is directed to prescribe sixty pills of hydrarg. iodid. virid., . . . and, if these disagree, one-twentieth to one-twelfth grain of opium (no preparation named) is to be added to each pill. The result upon the digestive tract of following such loosely given advice is obvious, to say nothing of the chance of cultivating the opium habit. Some of the definitions are extremely poor. P. 277, "A simple fracture is one that is not compound." "A sprain fracture is a fracture of a part of the articular surface." "A sprain is a temporary displaeement followed immediately by a return to place." Pott's fracture is not described clearly. We are advised (p. 295), in a "compound fracture, after anæsthetizing the patient, to purify [?] the wound, . . the reduction of the fragments being of secondary importance, . . . for a final readjustment can usually be made in the *second* or *third week*."

No notice is taken of atrophy of the caput femoris following a fall upon the trochanter as the inciting cause of some of the suits for malpractice mentioned

(p. 317). Just seventeen lines are devoted to fractures of the tibia and of both bones of the leg and their treatment. No distinction is made between true and false ankylosis, and in dislocations there is no mention of the important "Dugas sign," nor of Sir Astley Cooper's method of reduction of the head of the humerus.

Under appendicitis the advice as to the use of opium is not sufficiently guarded, and the much-discussed subject, "*when to operate*," is skilfully avoided. The chapter on head injuries is unsatisfactory from a want of conciseness of statement. Chiene's method is badly described (there is a slight error in the lettering of the diagram); the mode of determining counterpoint for trephining is not clear. Reed's methods are dismissed with a diagram, and the diagnosis of brain tumor from brain abscess is indefinitely, though copiously, discussed. P. 795, Littré's and Richter's hernias are confused. The diagnosis of congenital hernia is declared to rest upon its occurrence at birth or soon after, which is incorrect. P. 873, the second stage of gonorrhœa is called the "*stationary stage*," which is *mal apropos*, because, though the symptoms are stationary,—*i.e.*, so bad they can't get any worse,—yet the disease at this very time is extending backward; and, although considerable space is devoted to the treatment, yet the prescriptions are not put in the logical sequence for use. P. 1103, the permanganate of potassium method, called "*Kelly's*," was known before Kelly's time.

P. 1140, superior thyroid artery is said *invariably* to arise from the external carotid, which is untrue, and "the lingual veins to accompany the lingual artery," also untrue.

P. 1146, the right common iliac artery is declared to be the longer, "because the two common iliac veins join to form the vena cava."

P. 1149, in the ligation of the external iliac artery the *spermatic cord* is said to be out of reach,—and so it is (vas deferens?). Under local anæsthesia no mention is made of the infiltration method. The new additions to this edition consist mainly of sections upon acromegaly, symphyseotomy, the Hartley-Krause method for removal of the Gasserian ganglion, a very safe and conservative discussion of castration for enlarged prostate, with a number of additions upon the surgery of the head, spine, chest, and abdomen.

The chapters upon fractures and dislocations, hernia, diseases of the breast, and gynæcology have been enlarged and new illustrations added. We hope in subsequent editions to see the chapters on injuries of the head and of the abdomen thoroughly remodelled and condensed, that on fractures improved, the sections on traumatic fevers, septicæmia, and pyæmia put in one chapter, and their distinctions brought out more clearly, and certain subjects, like laryngitis, omitted all together. The faults of the work could easily have been corrected with a little care. We must not forget, however, that it was written with the view of being used as a text-book in conjunction with the didactic or clinical teaching of the authors at the various colleges.

It would add greatly to its value as a text-book if the language were more terse and the discussions more condensed. The deficiencies, though often annoying, are, many of them, of detail, not of principle, and, barring these, the book is a valuable *résumé* of the surgical art as it stands to-day,—fairly exhaustive, practical, and useful, and, while rather verbose, is a valuable addition to our surgical library.

E. W. H.

Disorders of the Male Sexual Organs. By Eugene Fuller, M.D., Instructor in Venereal and Genito-Urinary Diseases, New York Post-Graduate Medical School. Philadelphia: Lea Brothers & Co., 1895. One volume, 8vo, pp. 238, with numerous plates and cuts.

The title of this book is too comprehensive and is, in fact, a misnomer, and while it misleads the public, it does injustice to the author, who has with great labor and

study prepared a concise and comprehensive treatise on the disorders of the seminal vesicles.

The plates, though well executed, are most difficult and tedious of access, requiring the turning of many leaves to find their explanation, a fault which the publisher might easily have avoided by the addition of an explanatory table to each.

The book has the rare merit of containing an appreciable amount of original thought, experience, and labor, with only a necessary amount of compilation. It is an addition to our knowledge of the anatomy, pathology, and treatment of this particular portion of the male sexual organs.

C. L. L.

A Text-Book of Practical Therapeutics, with Especial Reference to the Application of Remedial Measures to Disease and their Employment upon a Rational Basis. By Hobart A. Hare, M.D., B.Sc., Professor of Therapeutics and Materia Medica in the Jefferson Medical College of Philadelphia, etc. Fifth Edition, enlarged and thoroughly revised. Philadelphia: Lea Brothers & Co., 1895.

This is the fifth edition, in as many years, of this well-known text-book. Rather more than half of the volume is occupied by a concise description of the physiological and therapeutical action of the various drugs, including all the newly-introduced ones of any importance. Remedial measures other than drugs form a carefully-written and important chapter. In the last third of the volume the therapy of the various diseases, taken alphabetically, is discussed, and the indications for the administration of the several drugs clearly explained.

The original *raison d'être* for this volume may be stated in the words of the author: the treatment of symptoms as they arise, by the employment of remedies recommended by some eminent authority, is a variety of empiricism whose existence has depended largely on the fact that many physicians of the past have either been so ignorant as to be led where a writer willed, or so slothful as to be willing to let others think for them. Scientific research has opened up to every one the possibility of using drugs with a distinct idea of the reason for their employment. The writer has endeavored in this work to bring together in a readable form the combined results of laboratory and bedside experience.

That a new edition has been called for each successive year is an emphatic assertion from the public that the writer has succeeded in his task; this result was to be expected. Dr. Hare is well known as a careful experimental pharmacologist, as well as an able physician; and in few works is the physiological action of the several drugs so lucidly and yet so succinctly stated as in this volume.

His remarks on therapeutics are clearly stated and extremely practical.

A. D. B.

A Practical Treatise on Materia Medica and Therapeutics, with Especial Reference to the Clinical Application of Drugs. By John V. Shoemaker, M.D., LL.D., Professor of Materia Medica, Pharmacology, Therapeutics, and Clinical Medicine in the Medico-Chirurgical College of Philadelphia, etc. Third Edition. Thoroughly revised. Philadelphia: The F. A. Davis Company, 1895.

This volume of Professor Shoemaker's is a large and comprehensive work of over 1100 pages. Formerly issued in two volumes, it has been thought more convenient in this edition to have the two combined in one. The author tells us in the preface that he has inserted an account of all the important later additions to our materia medica, and added much new matter in connection with many of the less-recently-introduced drugs. Treatment by means of animal extracts and immunized serum receives attention in a carefully-written article. The chapters on Electro-

therapeutics, Massage and the Rest Cure, Pneumotherapy, Hydrotherapy, Climatotherapy, the Application of Heat and Cold and of Hypnotism in the Treatment of Diseases, are excellent and practical *résumés* of our knowledge in their respective subjects. Having referred to this work frequently and extensively during the past few weeks, we note the large number of non-official drugs which receive more or less attention from the author; of recently-introduced drugs, all appear to have been noticed, and abstracts made of the various therapeutic properties claimed for them. In the remarks on the pharmacology of the various drugs, it would have occupied little space, and been of much practical advantage to the physician, to have stated exactly the solubility of the various drugs and soluble salts. We regret that, in speaking of the therapeutic action of the drugs, sufficient care, in our opinion, has not been taken to eliminate much that is worthless, and that, in the plenitude of his details, his grouping of facts is so faulty. The numerous quotations which are made from all recent writings contain many statements which can scarcely be said to represent the teaching given in our schools to-day. The same remark may be made of the prescriptions which abound on almost every page. We are surprised to note the very compound character of almost all of them. We had hopes that the present teaching in our better schools tended to simplicity.

We have no doubt, however, that this book, with its plethora of facts, will prove very serviceable to the busy physician. In its present form we do not regard it as so suitable for the student. A. D. B.

The Pocket Materia Medica and Therapeutics. A Résumé of the Action and Doses of all Official and Non-Official Drugs now in Common Use. By C. Henri Leonard, A.M., M.D. Second Edition, Revised and Enlarged. 1895. Detroit: The Illustrated Medical Journal Company.

This is a small closely-printed manual containing brief notes on all drugs which are in use at present. After the Latin name of the drug follows the termination of the genitive case. English, French, and German synonymes are stated. The habitat of the drug, the part used, and a description of its appearance follow. Its therapeutic uses, its synergists and the drugs incompatible with it, its dose, and the various official preparations made from it are all exactly but very concisely given. It has been written to serve as a ready-reference book in small compass; and it will doubtless fill a useful niche. Much care seems to have been exercised in its preparation. A. D. B.

Pathology and Treatment of Venereal Diseases. By Robert W. Taylor, M.D. Philadelphia: Lea Brothers & Co., 1895.

The author in the present work has combined his very extensive personal experience with that of other competent observers, and has produced a treatise upon venereal diseases which may be accepted as a standard of the most modern views upon this subject. The introductory chapter, tracing the evolution of our knowledge upon these subjects from the earliest times to Ricord's important differentiation between gonorrhœa and syphilis, and the later controversies of the unicists and dualists, is most interesting.

The author clearly points out the importance of pathological and bacteriological investigations in the study of venereal diseases. The subject of the gonococcus and its characteristic pathogenic action and its relationship to gonorrhœa is fully considered, although the author is not a strict adherent to the school of Neisser. While admitting that the gonococcus may be responsible for many cases of gonorrhœa, he points out the fact, substantiated by many other careful observers, that other micro-organisms are at times the active agents in producing this affection, and is of the opinion that a more careful and extended study of the bacteriology of the genitalia must be undertaken before the matter can be considered definitely settled.

The pathology of stricture is exhaustively considered, and the importance of a careful study of the normal urethra is clearly shown. The author is not a friend of indiscriminate cutting and over-distention in the treatment of this affection, and his views upon stricture of large calibre cannot fail to meet the approval of judicious surgeons.

In discussing the etiology of chancroid the author recalls the fact that Dr. Bumstead and he were among the first to point out its now generally conceded non-specific origin.

The subject of syphilis is considered most exhaustively, and a special chapter upon syphilitic disease of the ear is introduced.

Throughout the volume the author, upon the question of treatment, is apt to express his views very dogmatically, but, as his experience has been most extensive, this, in our judgment, does not detract from the value of the work.

The book is well illustrated, many of the illustrations being original.

The work as a whole may be considered a very satisfactory exposition of the modern pathology and treatment of venereal diseases, and as such we are sure it will find favor with the profession.

CLINICAL LECTURES ON DISEASES OF THE NERVOUS SYSTEM. Delivered at the National Hospital for the Paralyzed and Epileptic, London. By W. R. Gowers, M.D., F.R.S. Philadelphia: P. Blakiston, Son & Co., 1895.

The medical public is certainly under great obligations to Dr. Gowers for having collected these valuable lectures and published them in book form. It takes but a glance at the pages to reveal their great practical value, in that they do not consist merely of bald descriptions and clinical details, but they are replete with the very best advice. It would be difficult to conceive, for instance, of a lecture more directly useful to a student or practitioner than the opening one on the Principles of the Diagnosis of Diseases of the Nervous System. After dwelling upon the ordinary method of making a diagnosis,—namely, by forcing a case to conform to this or that "type" of disease,—and pointing out its insufficiency and the danger of error, he gives this most valuable instruction:

"Whenever you find yourself in the presence of a case that is not at once and completely familiar to you in all its details, forget for the time all your types and all your names. Deal with the case as one that has never been seen before, and work it out as a new problem, *sui generis*, to be investigated as such. Observe each symptom carefully, and consider its significance. Then put the several symptoms together, and consider the meaning of their combination, especially whether there is any one part of the nervous system at which disease might cause them all. Lastly, consider the way they came on, as indicating the nature of the lesion, comparing this with the evidence of their seat, and remembering also that their character may in itself tell you something of their probable nature."

Another valuable lesson may be learned from Lecture II., on Mistaken Diagnosis, in which this famous teacher uses one of his own errors as an illustration and does so in a most interesting manner.

The other lectures embrace such subjects as Syphilis, Bulbar and Facial Paralysis, Locomotor Ataxia, Syringomyelia, Neuralgia, and Optic Neuritis, and they are most interesting as revealing the methods of instruction pursued by Dr. Gowers. Every important point is dwelt upon,—the possible significance of the various symptoms is considered in detail as is also the general application of the knowledge gained. Not only students and practitioners but the teachers of clinical medicine themselves will find the perusal of these lectures of the utmost benefit.

F. X. D.

COLOR-VISION AND COLOR-BLINDNESS. A Practical Manual for Railroad Surgeons. By J. Ellis Jennings, M.D. (Univ. Penna.), Lecturer on Ophthalmoscopy and Chief of the Eye Clinic in the Beaumont Hospital Medical College, etc. Illustrated with 1 colored full-page plate and 21 photo-engravings. Crown octavo, 110 pages. Cloth, $1.00 net. Philadelphia: The F. A. Davis Co., Publishers, 1914 and 1916 Cherry Street.

The author of this little manual for railroad surgeons has chosen a most opportune time to send forth this appeal to those who have control of the life and the safety of the travelling public.

The preliminary portion of the volume gives just sufficient data as regards the historical facts of the condition, the physiological anatomy of the retina, the physics of light, color-sensations, and the theories of normal and subnormal color-perception, to prepare the reader for a proper understanding of the more important practical side of the subject.

The lessons as to the various methods of detection of subnormal perception are well told in the remaining chapter. Without bias as to any one method or invidious assertion of superiority of one plan over another, the many excellent tests with their varying degrees of usefulness are dealt with in a candid and a frank manner by separating the good from the bad, the applicable from the non-applicable, and the easy from the difficult in each. In other words, there is given in the book's few pages an excellent epitome of that which is most practical for those who wish to work quickly and properly in such matters.

For the proposed medical readers and workers, the railway surgeons, for whom this little book is intended, the reviewer—a practical worker in such directions himself—unhesitatingly asks them to peruse its pages carefully from beginning to end before beginning to take up the subject any further, and before outlining or evolving any new plans that may seem to them for the best interests of any section of travel that may be under their jurisdiction.

C. A. O.

BOOKS RECEIVED.

J. B. LIPPINCOTT COMPANY, PHILADELPHIA.

INTERNATIONAL CLINICS. Volume iv. Fifth Series. January, 1896.

REPORTS OF SOCIETIES.

TRANSACTIONS OF THE MEDICAL SOCIETY OF NORTH CAROLINA.

TRANSACTIONS OF THE COLLEGE OF PHYSICIANS OF PHILADELPHIA. Third Series. Volume xviii.

JOHNS HOPKINS PRESS, BALTIMORE.

JOHNS HOPKINS REPORTS. Volume v.

W. B. SAUNDERS, PHILADELPHIA.

MANUAL OF MEDICAL JURISPRUDENCE AND TOXICOLOGY. By Henry C. Chapman, M.D.

F. A. DAVIS CO., PHILADELPHIA.

SYPHILIS IN THE MIDDLE AGES AND IN MODERN TIMES. By Dr. F. Buret. Translated by A. H. Ohmann-Dumesnil.

PRACTICAL URANALYSIS AND URINARY DIAGNOSIS. Second edition. By C. W. Purdy.

M. L. HOLBROOK & CO.

PHYSICAL, INTELLECTUAL, AND MORAL ADVANTAGES OF CHASTITY. By Dr. M. L. Holbrook.

LEDGER, SMITH & CO., LONDON.

THE MEDICAL DIGEST. Appendix to August, 1895. By Richard Neale, M.D.

WILLIAM WOOD & CO., NEW YORK CITY.

MEDICAL JURISPRUDENCE, FORENSIC MEDICINE, AND TOXICOLOGY. Volume iii Edited by R. A. Willhaus, A.M., M.D., and Tracy C. Becker, A.B., LL.B Well illustrated. Translated by Joseph Collins, M.D.

LEA BROTHERS & CO., PHILADELPHIA.

THE YEAR-BOOK OF TREATMENT FOR 1896.

APPENDIX TO DUNGLISON'S MEDICAL DICTIONARY. Twenty-first edition.

AMERICAN MEDICAL PRESS, NEW YORK.

THE HISTORY OF PROSTITUTION. By William W. Sanger, M.D.

ITEMS OF INTEREST.

International Congress of Dermatology.

The Third International Congress of Dermatology will be held in London, on August 4 to 8, 1896. The programme is an interesting one, papers being promised by many distinguished dermatologists, as Kaposi, of Vienna; Unna, of Hamburg; Fournier and Hallopeau, of Paris; Hutchinson, of London; Campana, of Rome; Neisser, of Breslau; and Morrow, of New York. The Congress has secured for its use the building known as Examination Hall, on the Victoria Embankment. This will afford every facility for all kinds of demonstrations; cases, pictures, museum, etc. Special efforts are being made to have large clinical demonstrations of cases, and all who have been in London know how rich is the material there. Those intending to join the Congress should notify the secretary, Dr. J. J. Pringle, 23 Lower Seymour Street, W., London, of their intention as soon as possible. The membership fee is $5.00. Dr. George Thomas Jackson, of 14 E. Thirty-first Street, New York, is the secretary for the United States.

What our Presidents died from.

The following interesting clipping has been going the rounds of the daily press:

1. George Washington died from a cold which brought on laryngitis; buried on his estate at Mount Vernon, Va.

2. John Adams died from senile debility; buried at Quincy, Mass.

3. Thomas Jefferson died of chronic diarrhœa; buried on his estate at Monticello, Va.

4. James Madison died of old age; buried on his estate at Montpelier, Va.

5. James Monroe died of general debility; buried in Marble Cemetery, New York City.

6. John Quincy Adams died of paralysis, the fatal attack overtaking him in the House of Representatives; buried at Quincy, Mass.

7. Andrew Jackson died of consumption and dropsy; buried on his estate, the Hermitage, near Nashville, Tenn.

8. Martin Van Buren died of catarrh of the throat and lungs; buried at Kinderhook, N. Y.

9. William Henry Harrison died of pleurisy, induced by a cold taken on the day of his inauguration; buried near North Bend, Ohio.

10. John Tyler died from a mysterious disorder like a bilious attack; buried at Richmond, Va.

11. James K. Polk died from weakness, caused by cholera; buried on his estate in Nashville, Tenn.

12. Zachary Taylor died from cholera morbus, induced by improper diet; buried on his estate near Louisville, Ky.

13. Millard Fillmore died from paralysis; buried in Forest Hill Cemetery, Buffalo, New York.

14. Franklin Pierce died from inflammation of the stomach; buried at Concord, N. H.

15. James Buchanan died of rheumatism and gout; buried near Lancaster, Pa.

16. Abraham Lincoln, assassinated by J. Wilkes Booth; buried at Springfield, Ill.

17. Andrew Johnson died from paralysis; buried at Greenville, Tenn.

18. Ulysses S. Grant died from cancer of the throat; buried at Riverside Park, New York City.

19. Rutherford B. Hayes died from paralysis of the heart; buried at Fremont, Ohio.

20. James A. Garfield, assassinated by Charles J. Guiteau; buried at Cleveland, Ohio.

21. Chester A. Arthur died from Bright's disease; buried in Rural Cemetery, Albany, New York.

This leaves Benjamin Harrison the only living ex-President.

William Meyer Memorial.

The co-operation of the medical profession is solicited in the movement now in progress to erect a monument to the late Wilhelm Meyer, by whose death the profession has lost a brilliant, useful, and greatly appreciated member, and the world at large one of the leading and most practical philanthropists of the time. Professor Meyer's distinguished service to humanity in the recognition of the condition known as adenoid hypertrophy at the vault of the pharynx,

and in the efficient means devised by him for its cure, will doubtless, as it should, awaken a ready and liberal response not only from many sufferers to whom this great man brought relief, but from all sympathizers in the advanced work of the true physician. It is proposed to erect in Copenhagen, Professor Meyer's native city, a monument to his memory, and for this purpose committees have been formed in the principal countries of Europe to forward the work. A large and influential committee has been appointed in this country, and it is hoped that all who have profited by the results of Professor Meyer's teaching, even among the laity, will aid in this commendable work. Contributions may be sent either to Dr. Bryson Delavan, 1 East Thirty-third Street, New York City, or to the Philadelphia representative, Dr. Harrison Allen, 1933 Chestnut Street.

A Degree to be required for Admission to the Harvard Medical School in 1901.

The early announcement is made that the Faculty of Harvard Medical School have decided to follow the example of Johns Hopkins University and require a degree for admission for those intending to pursue the study of medicine in that institution. The following resolution[1] was passed last January: "On and after June, 1901, candidates for admission to the Medical School must present a degree in arts, literature, philosophy, science, or medicine from a recognized college or scientific school, with the exception of such persons, of suitable age and attainments, as may be admitted by a special vote of the Faculty taken in each case. All candidates, whether presenting a degree or not, are and will be required to satisfy the Faculty that they have had a course in theoretical and descriptive (inorganic) chemistry and qualitative analysis, sufficient to fit them to pursue the courses in chemistry given at the Medical School." The number of students attending the present session and having such a degree is about forty per cent. This shows a considerable increase over the 28.2 per cent. in the year 1892. The maximum of 53.9 per cent. was reached in the year 1884.

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[1] Boston Medical and Surgical Journal, January 9, 1896.

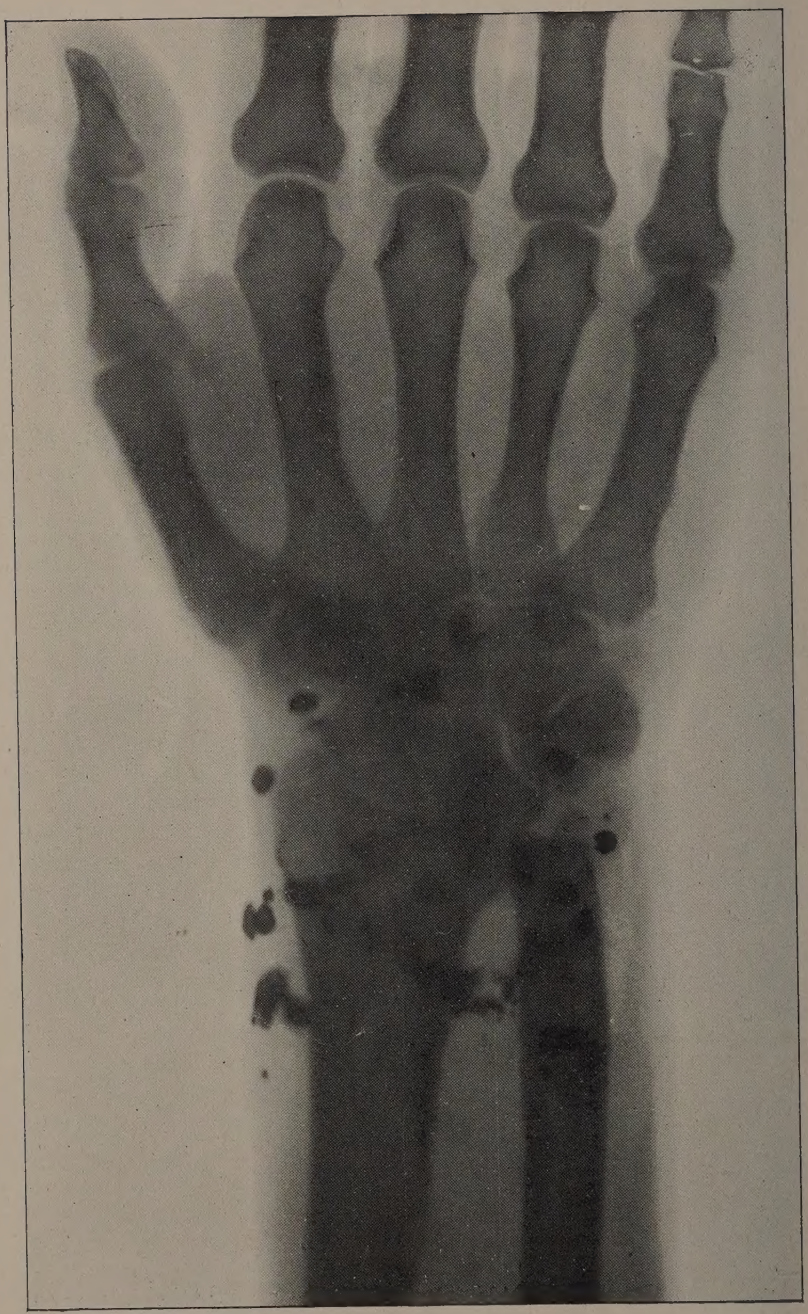

PLATE I.—Röntgen picture of the wrist, showing shot.